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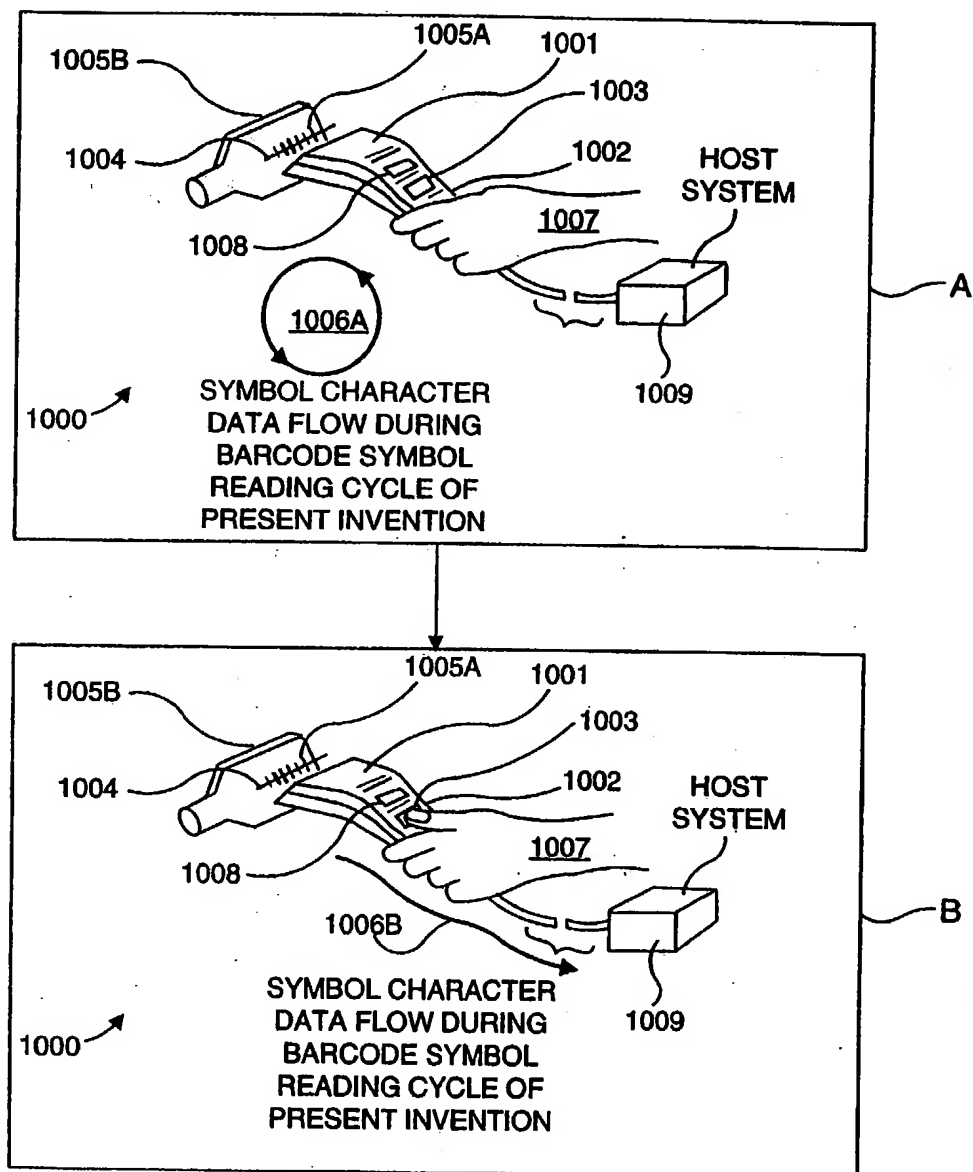


FIG. 1

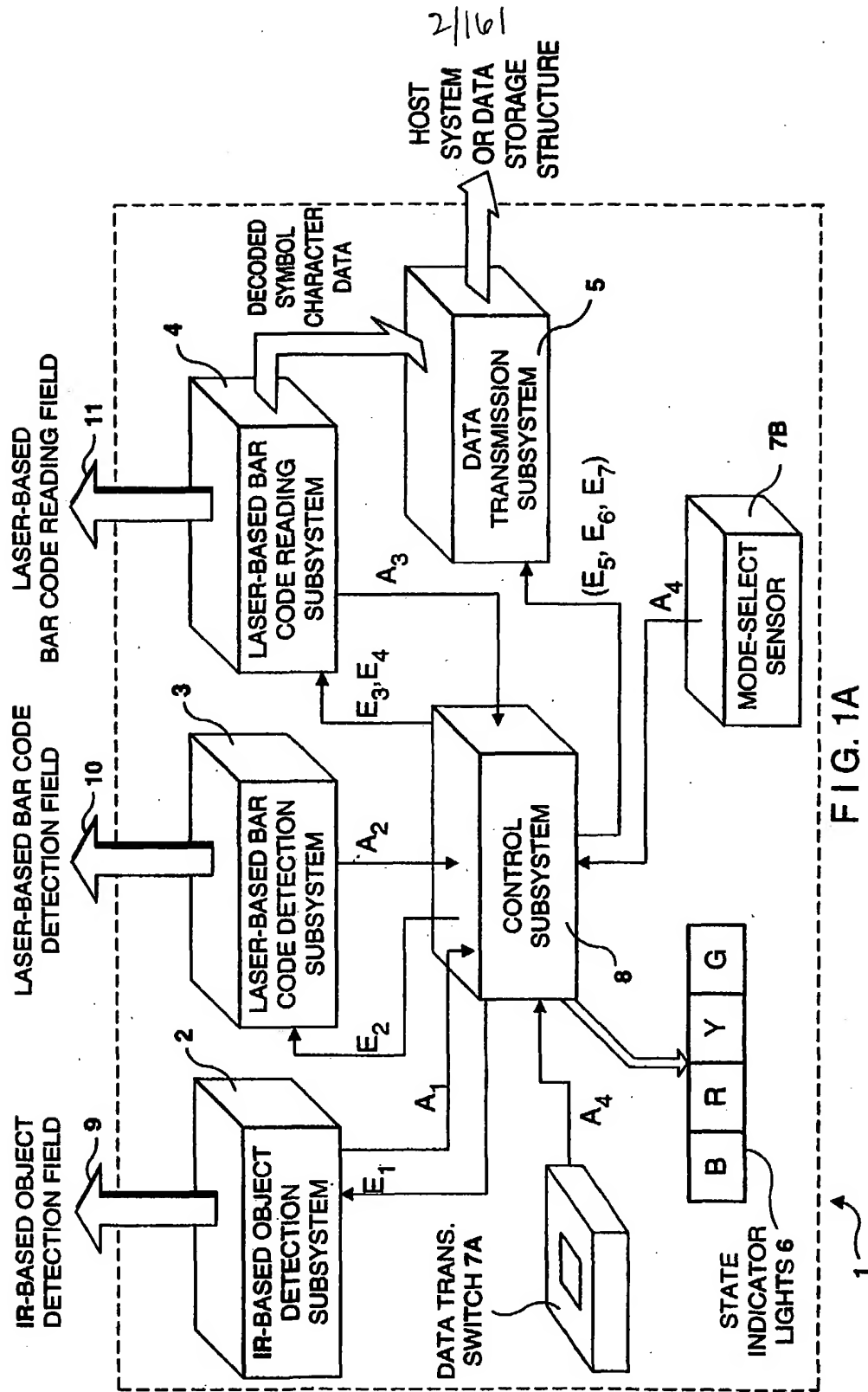


FIG. 1A

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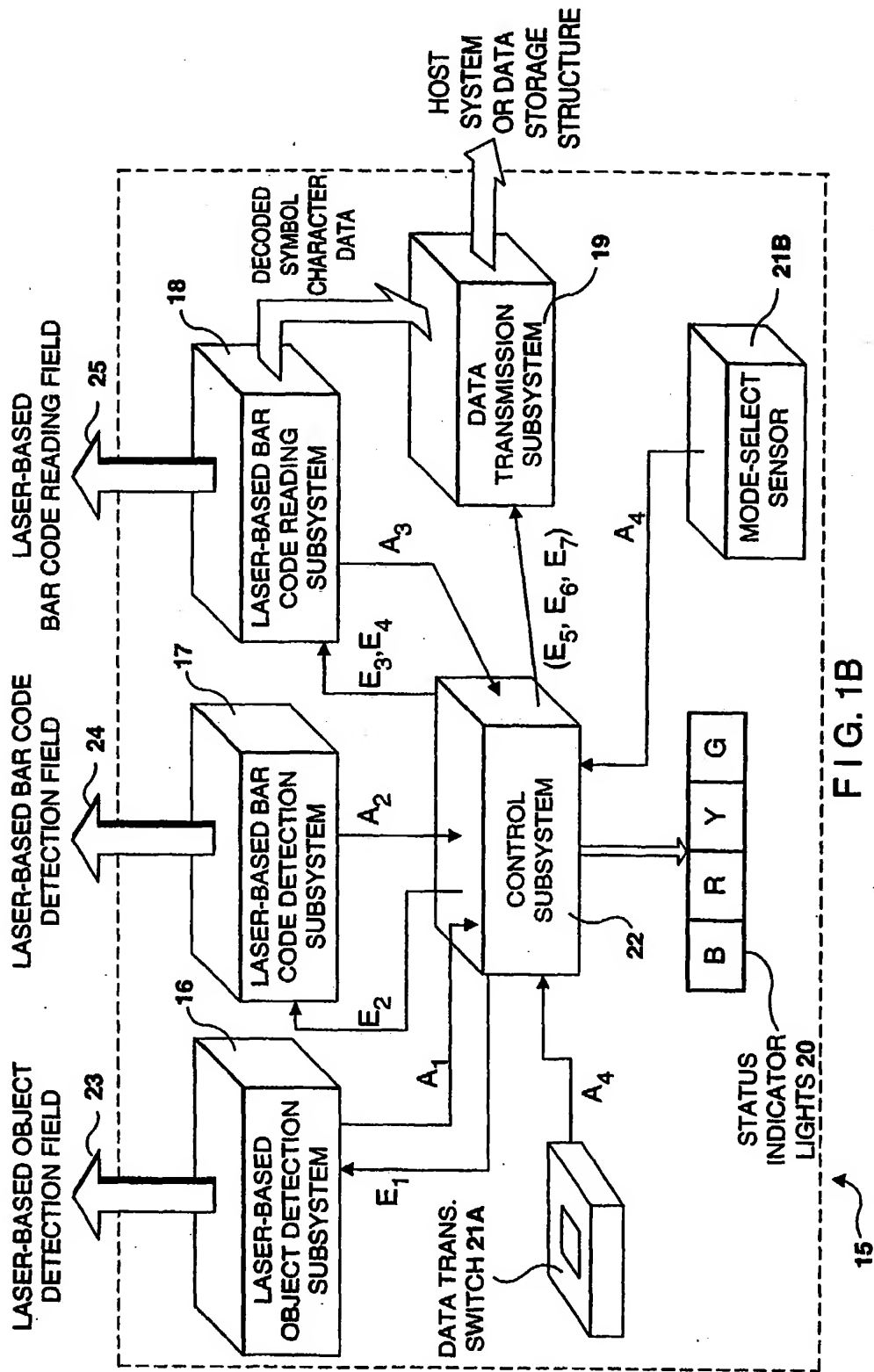
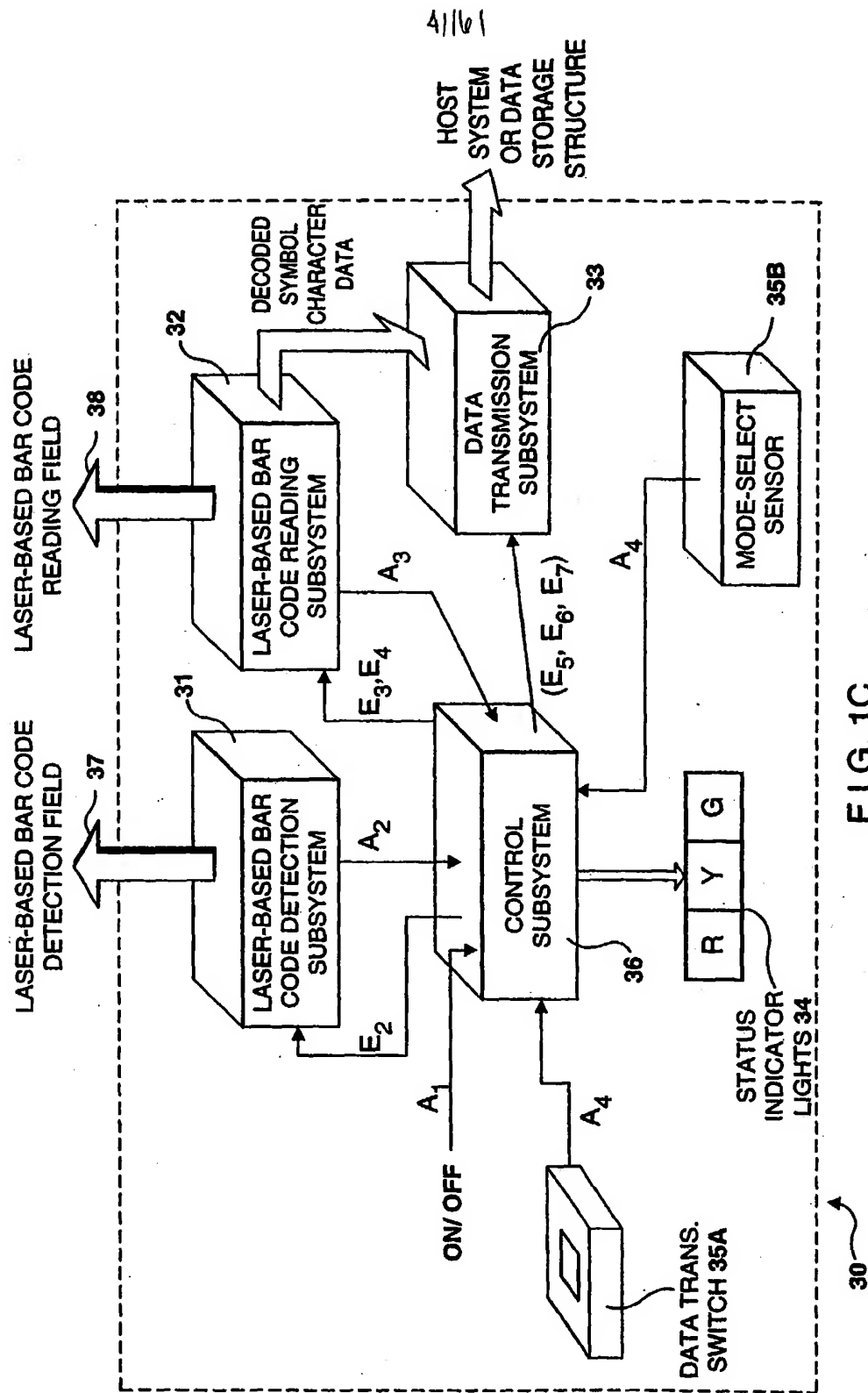


FIG. 1B





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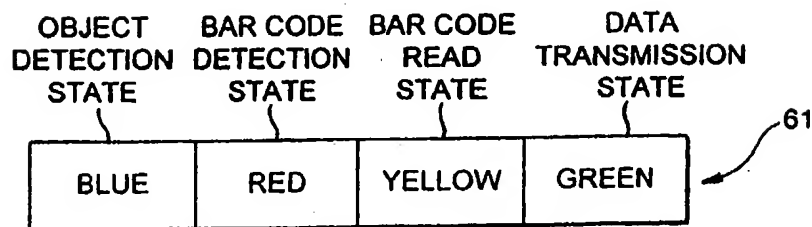
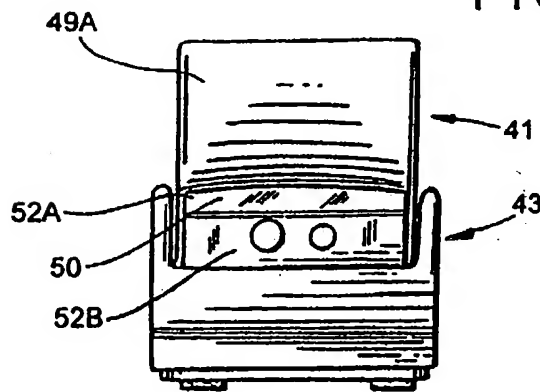
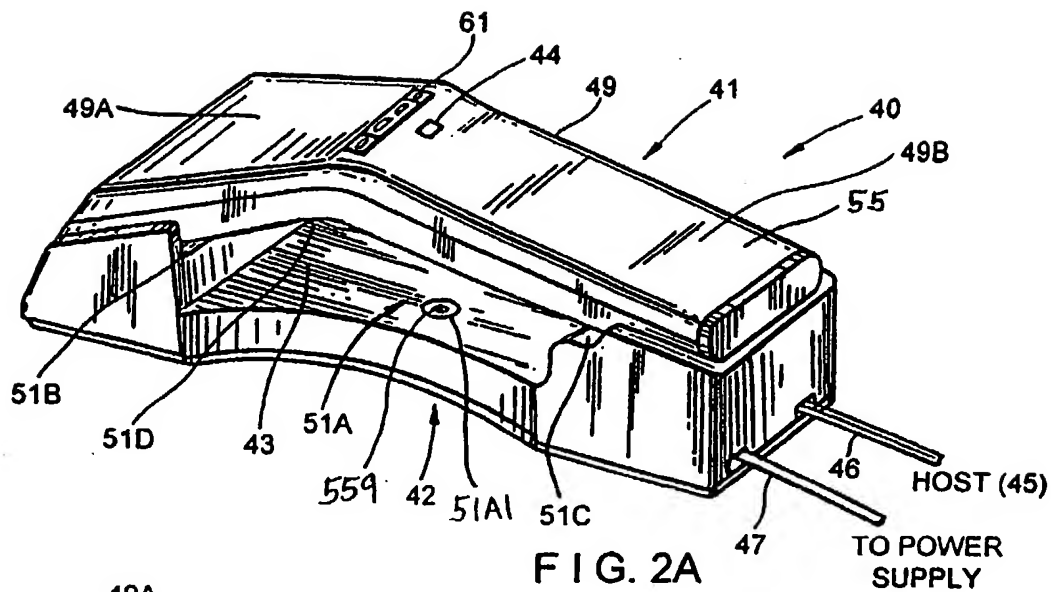
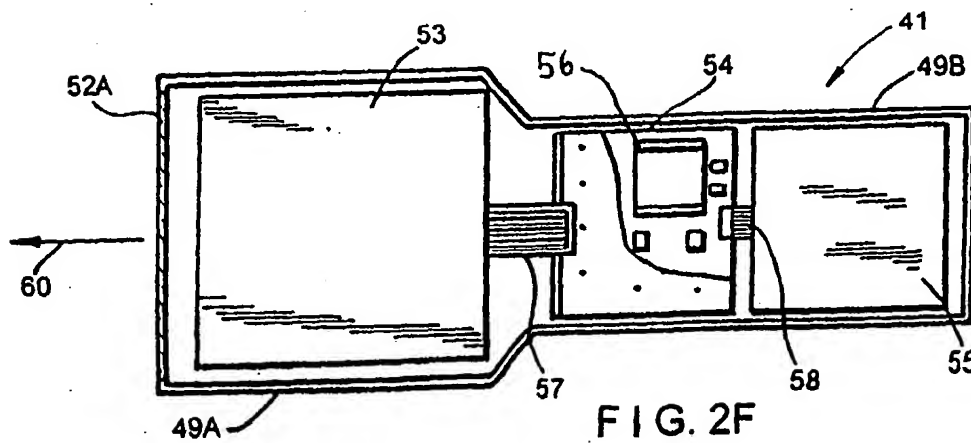
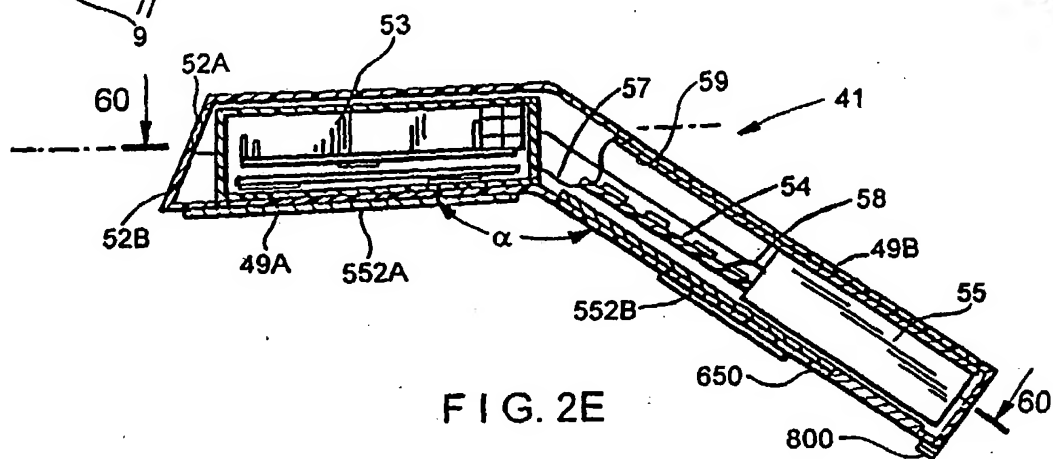


FIG. 2C



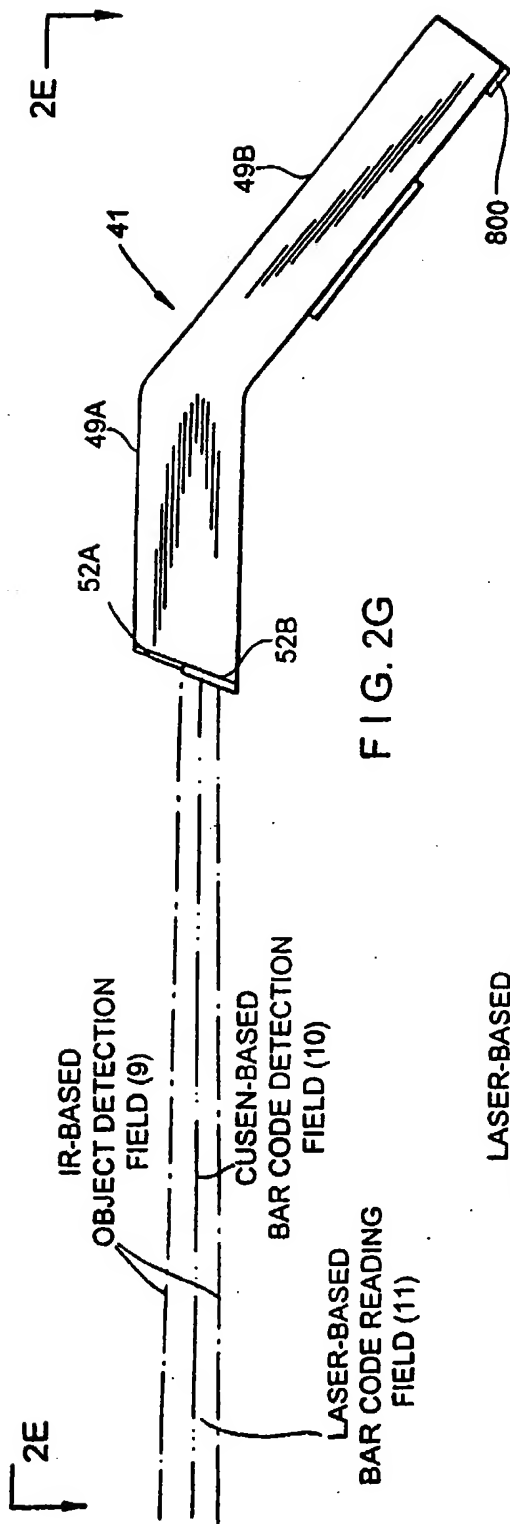


FIG. 2G

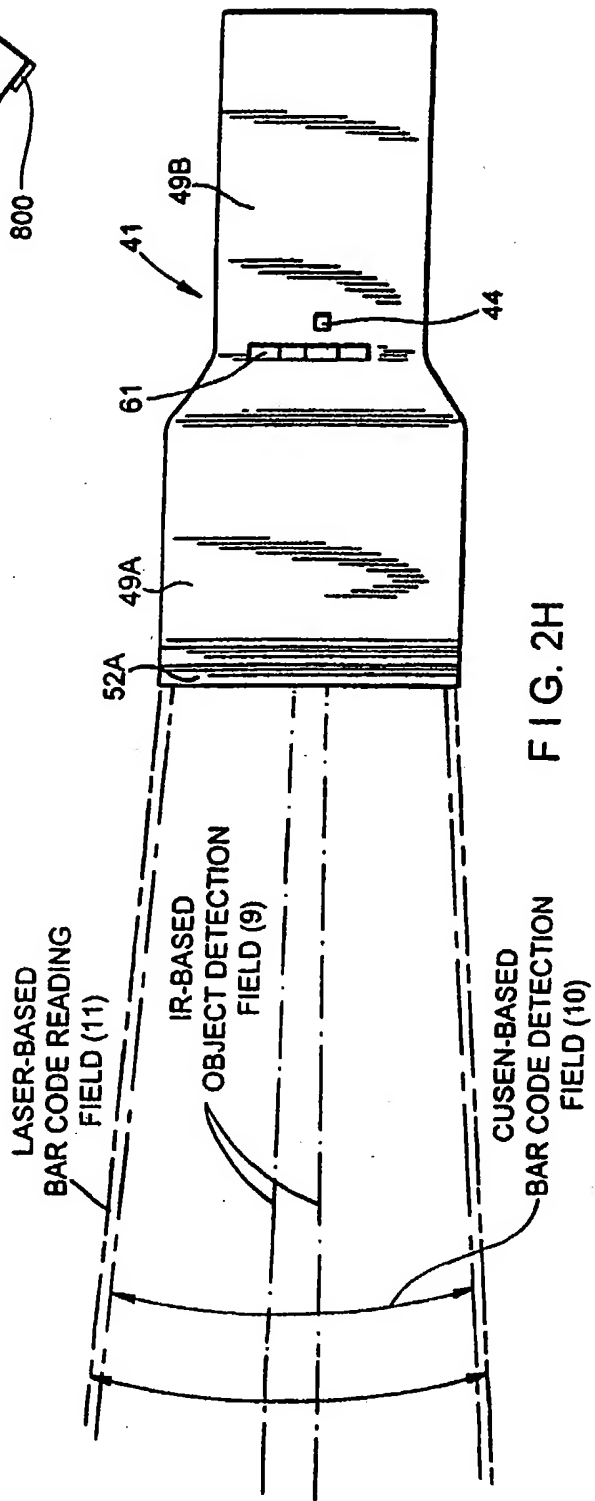


FIG. 2H

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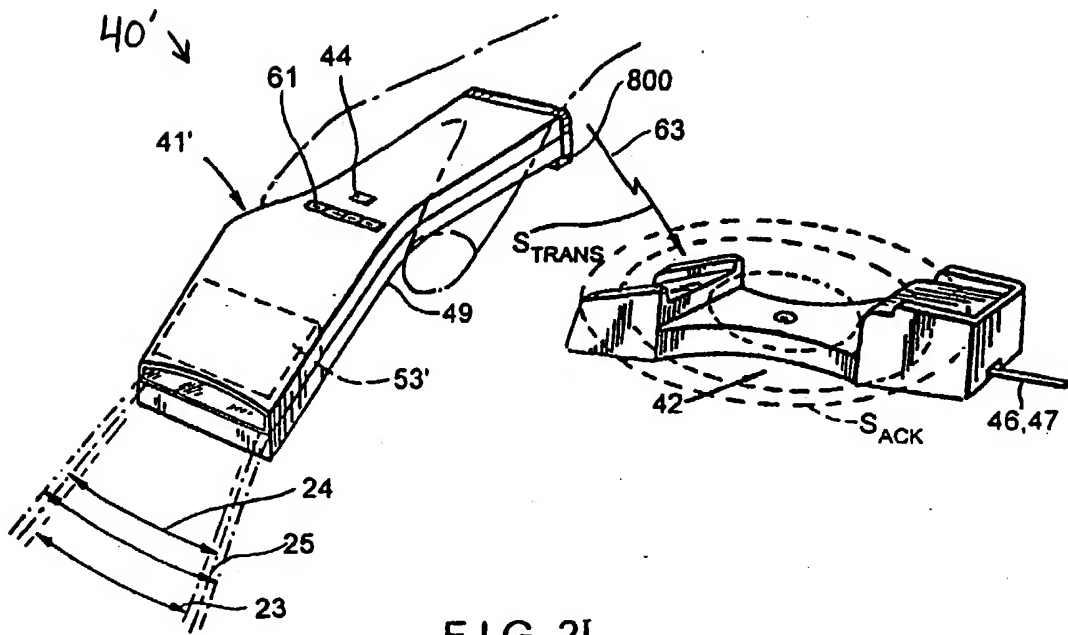


FIG. 2I

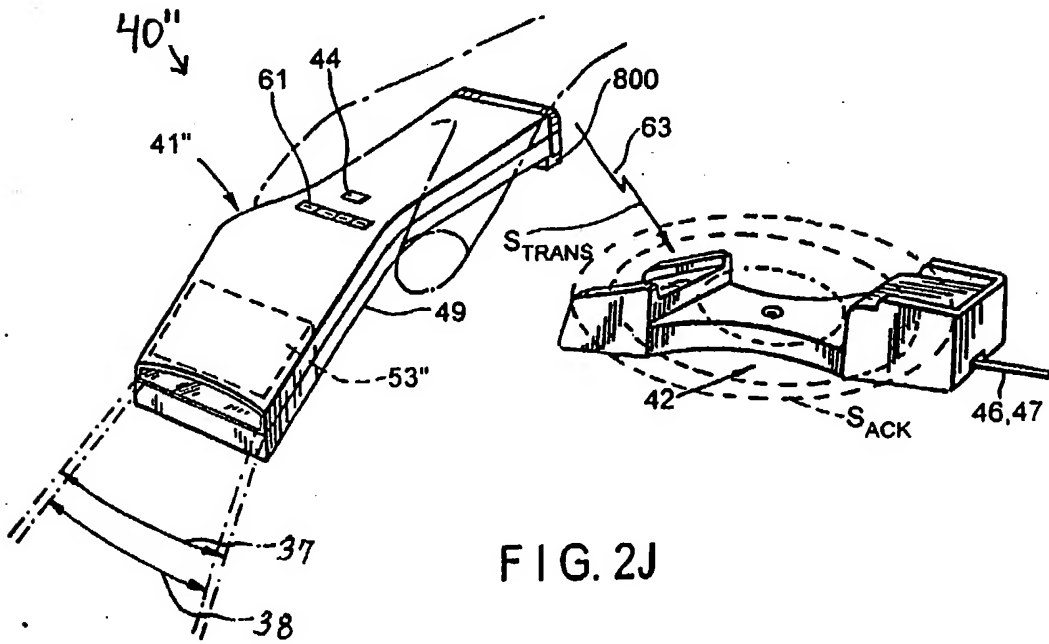
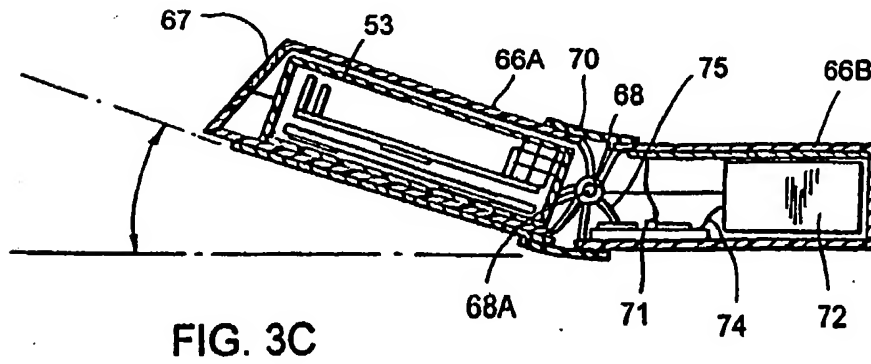
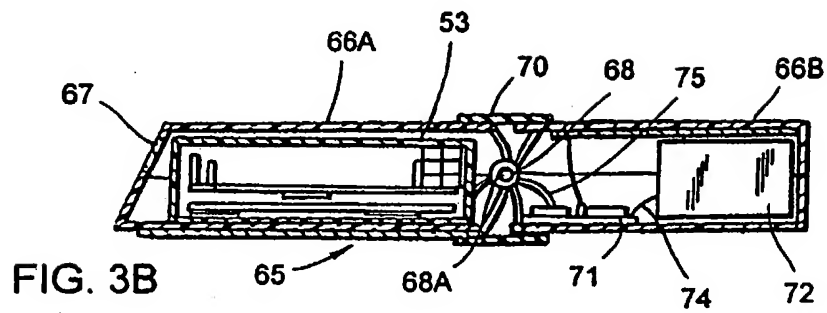
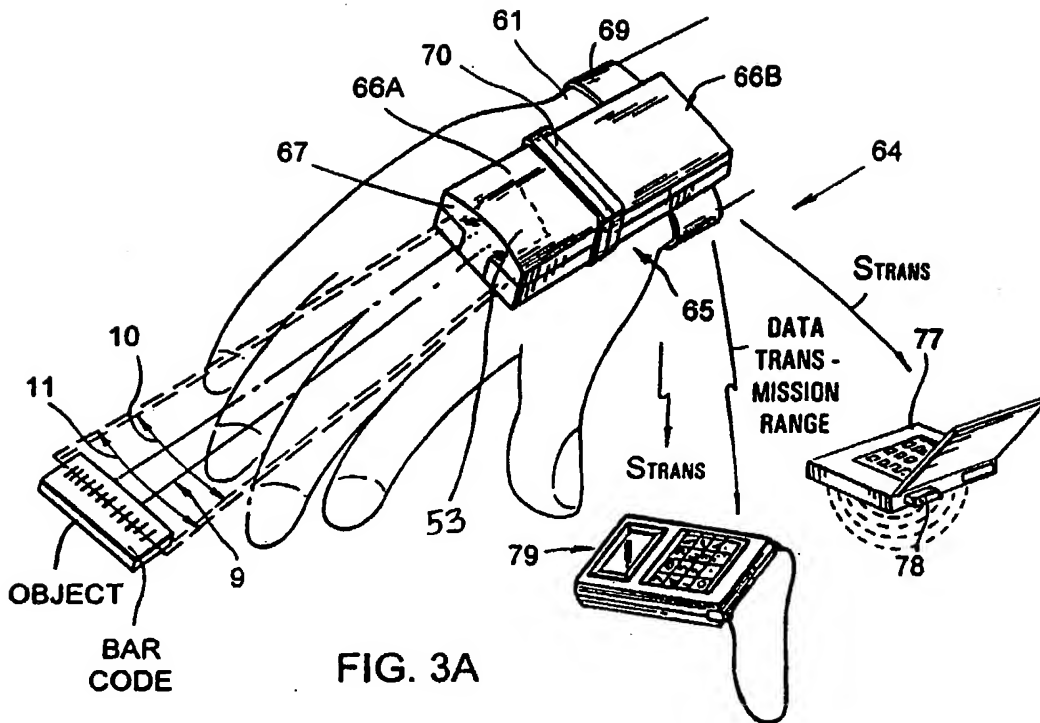
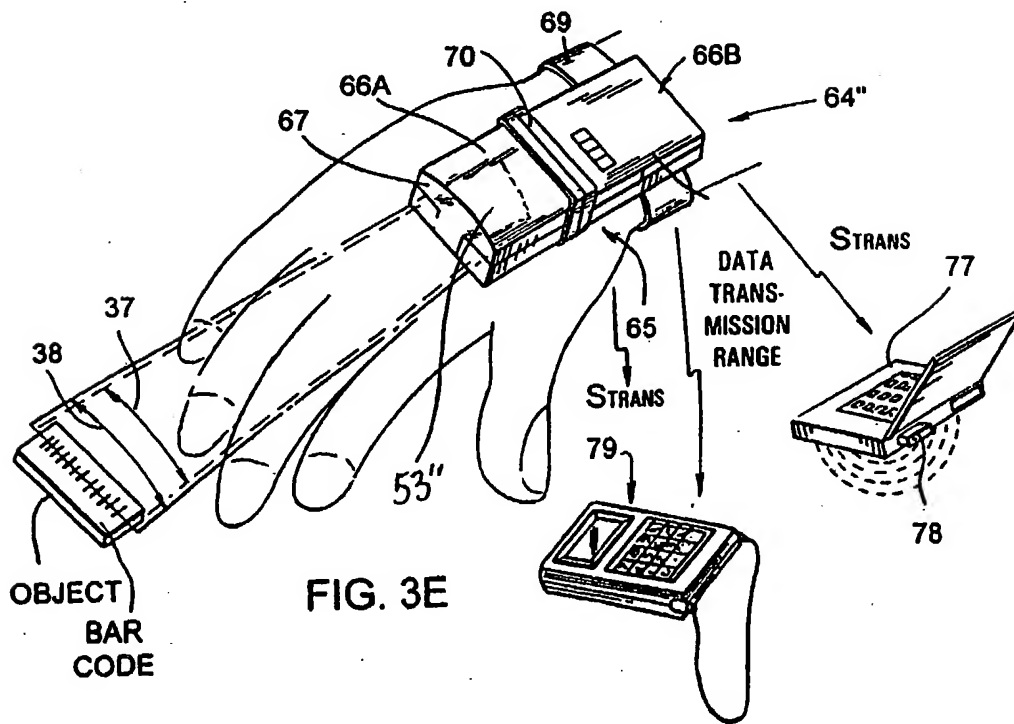
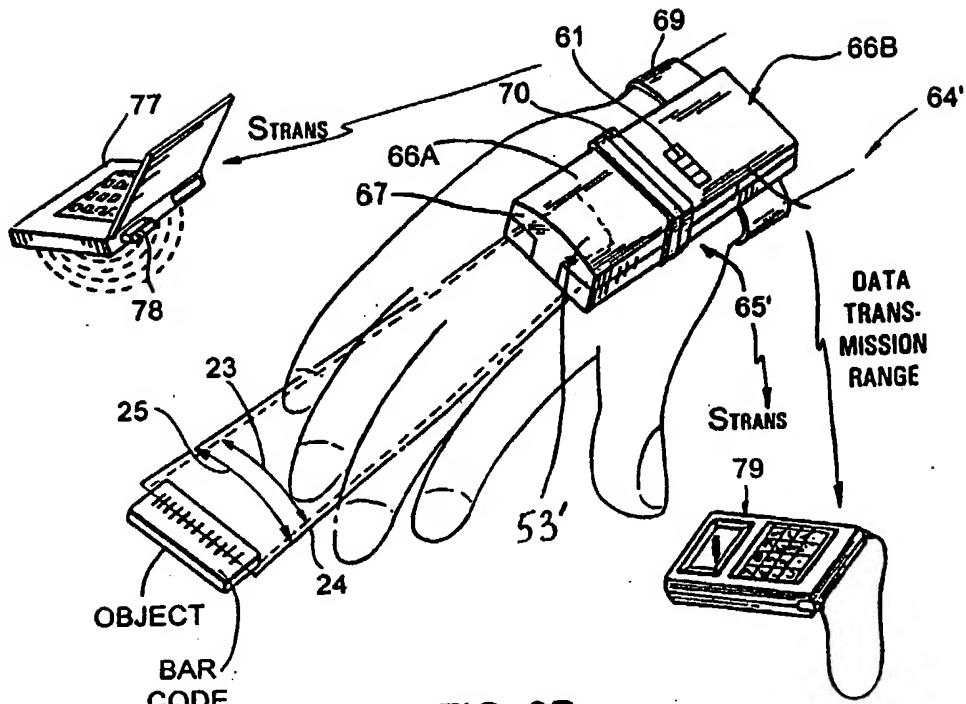


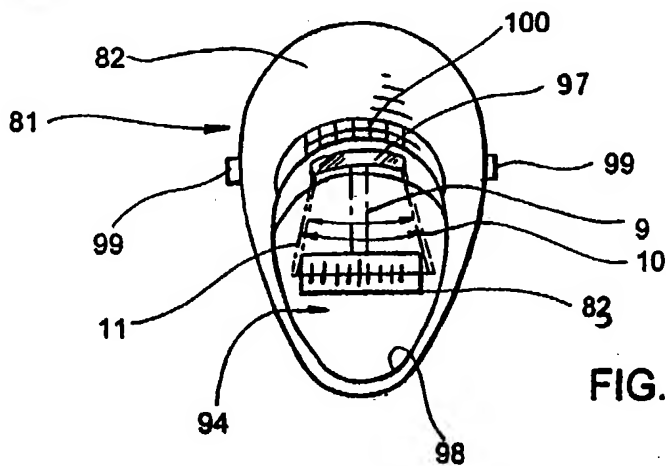
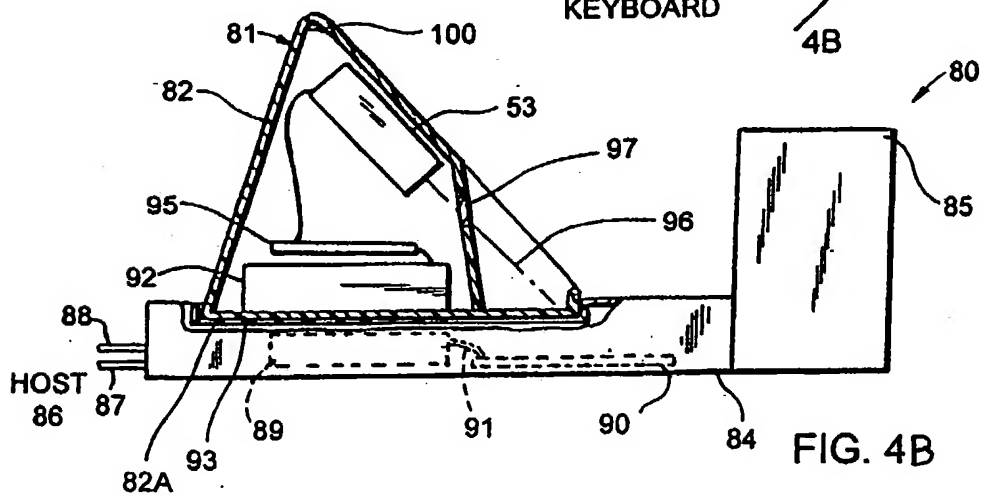
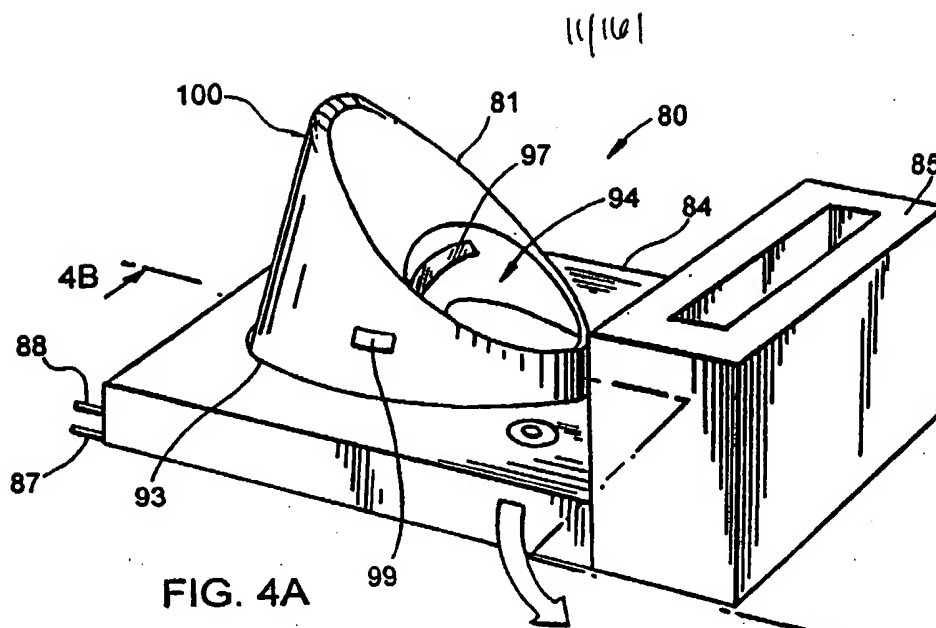
FIG. 2J

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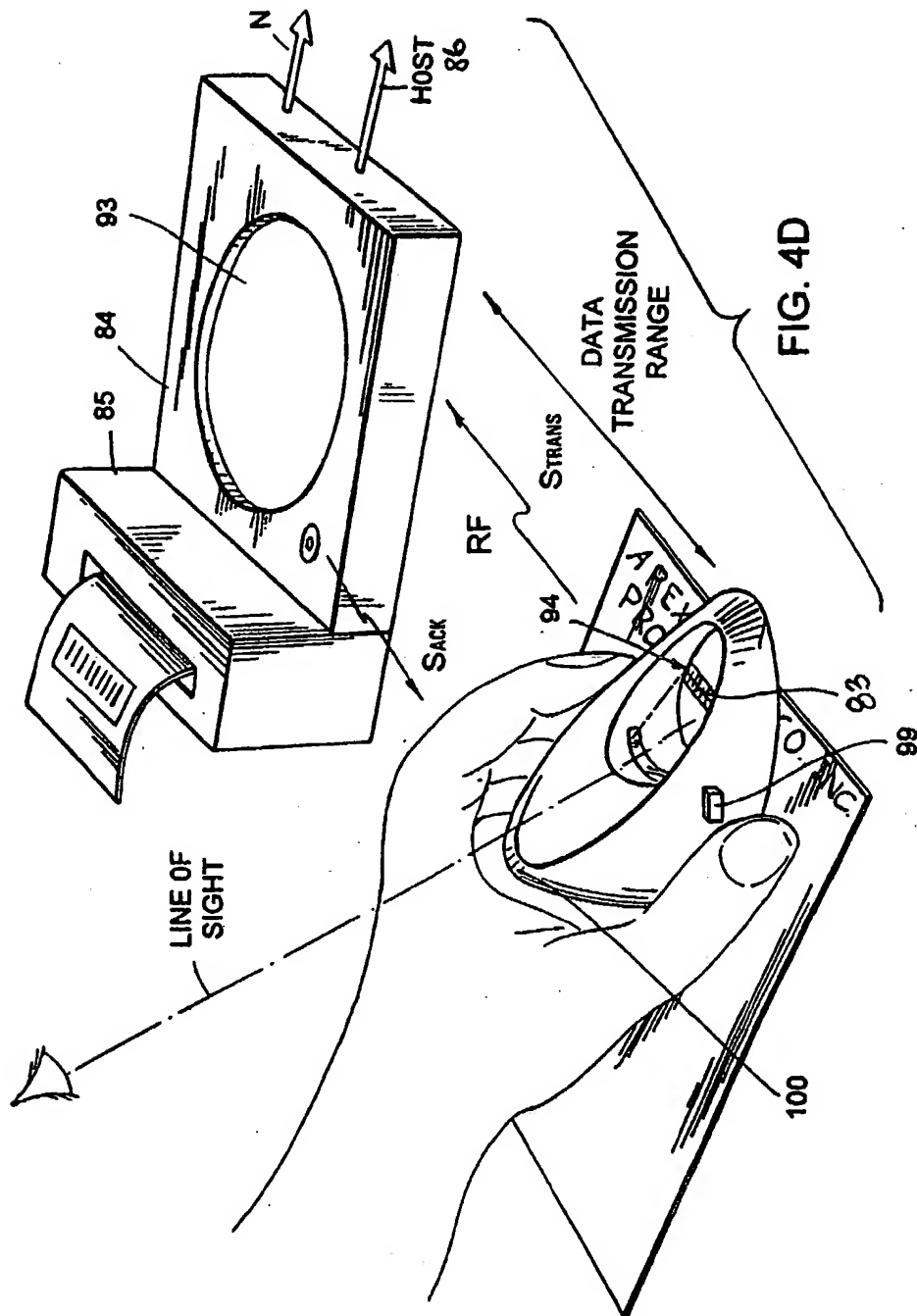


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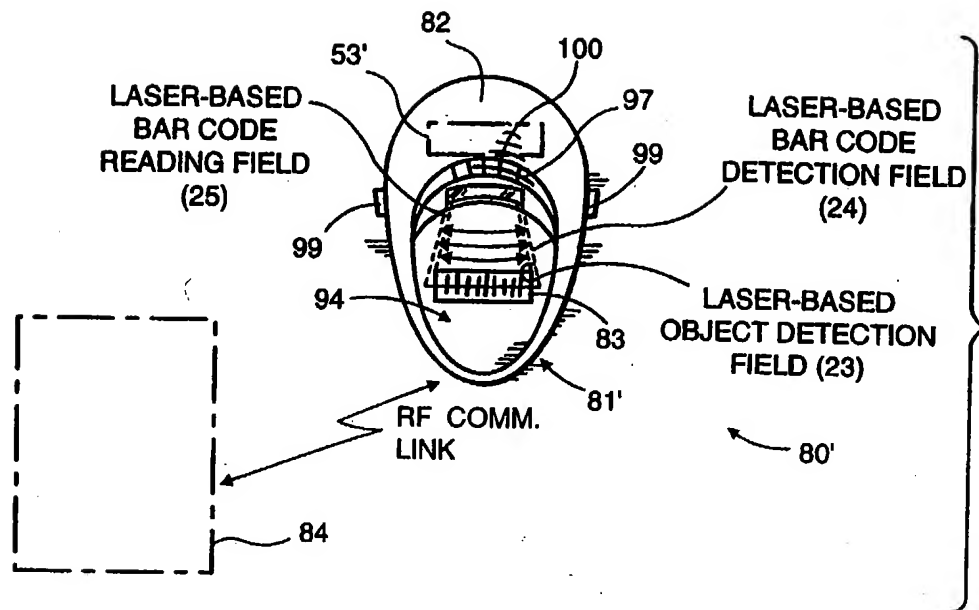


FIG. 4E

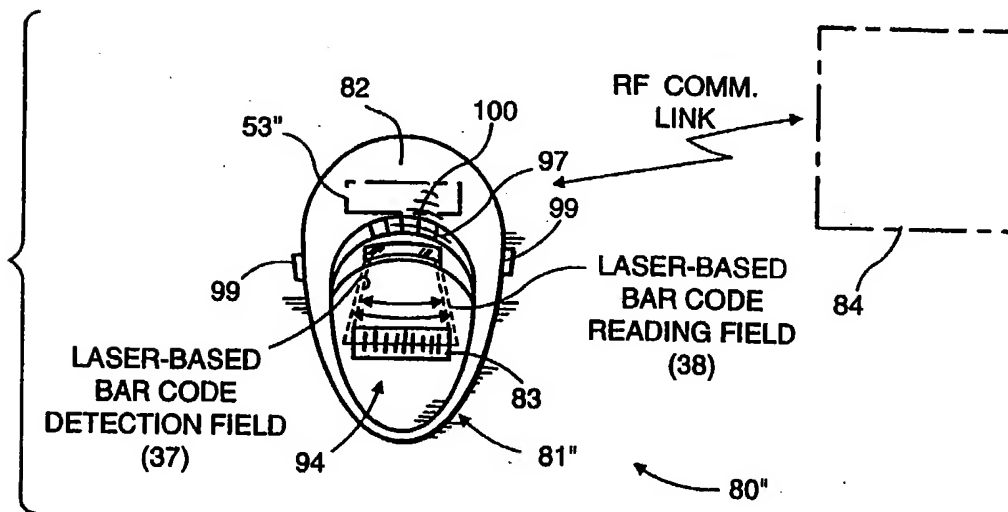


FIG. 4F

1A(16)

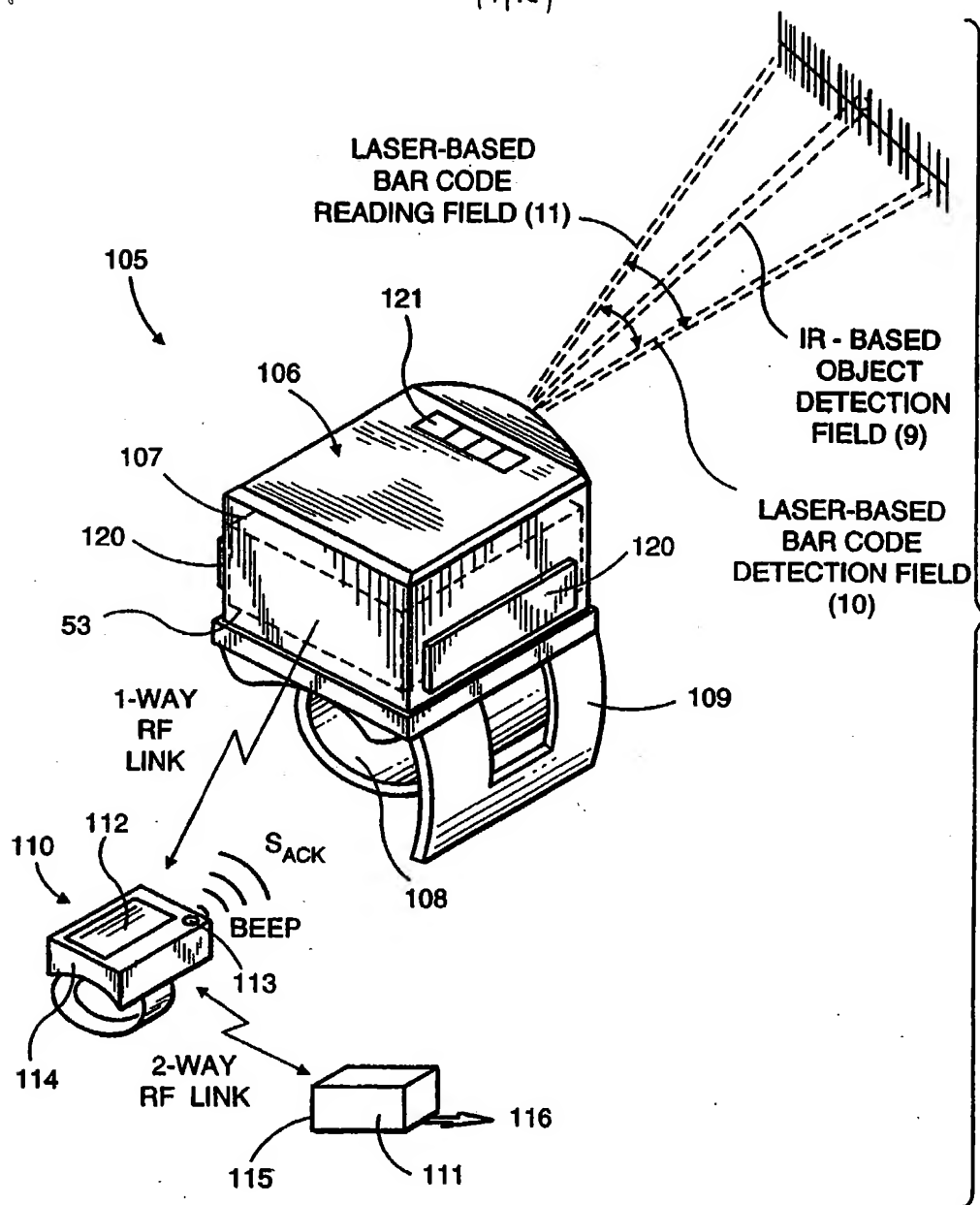


FIG. 5A

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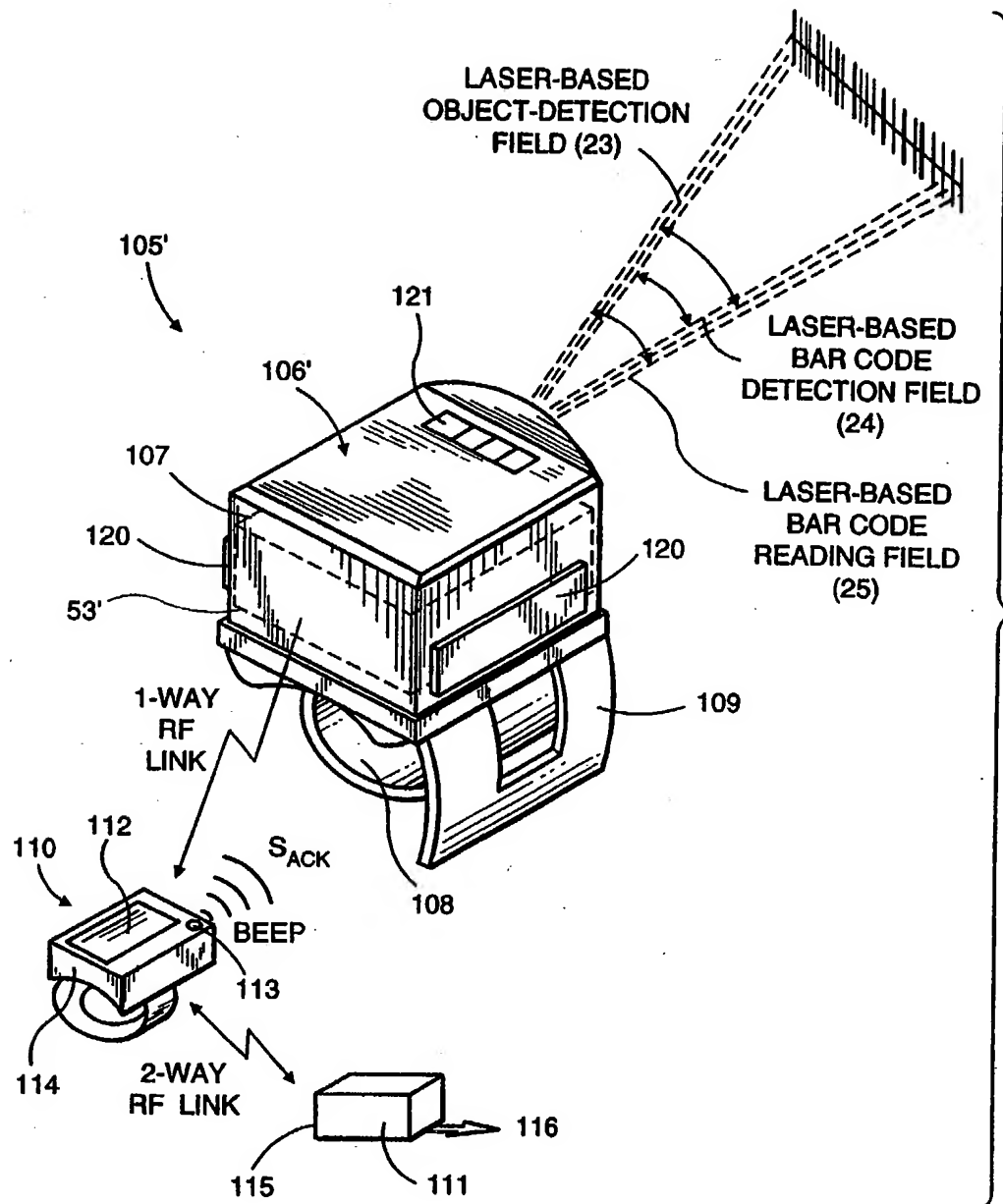


FIG. 5B

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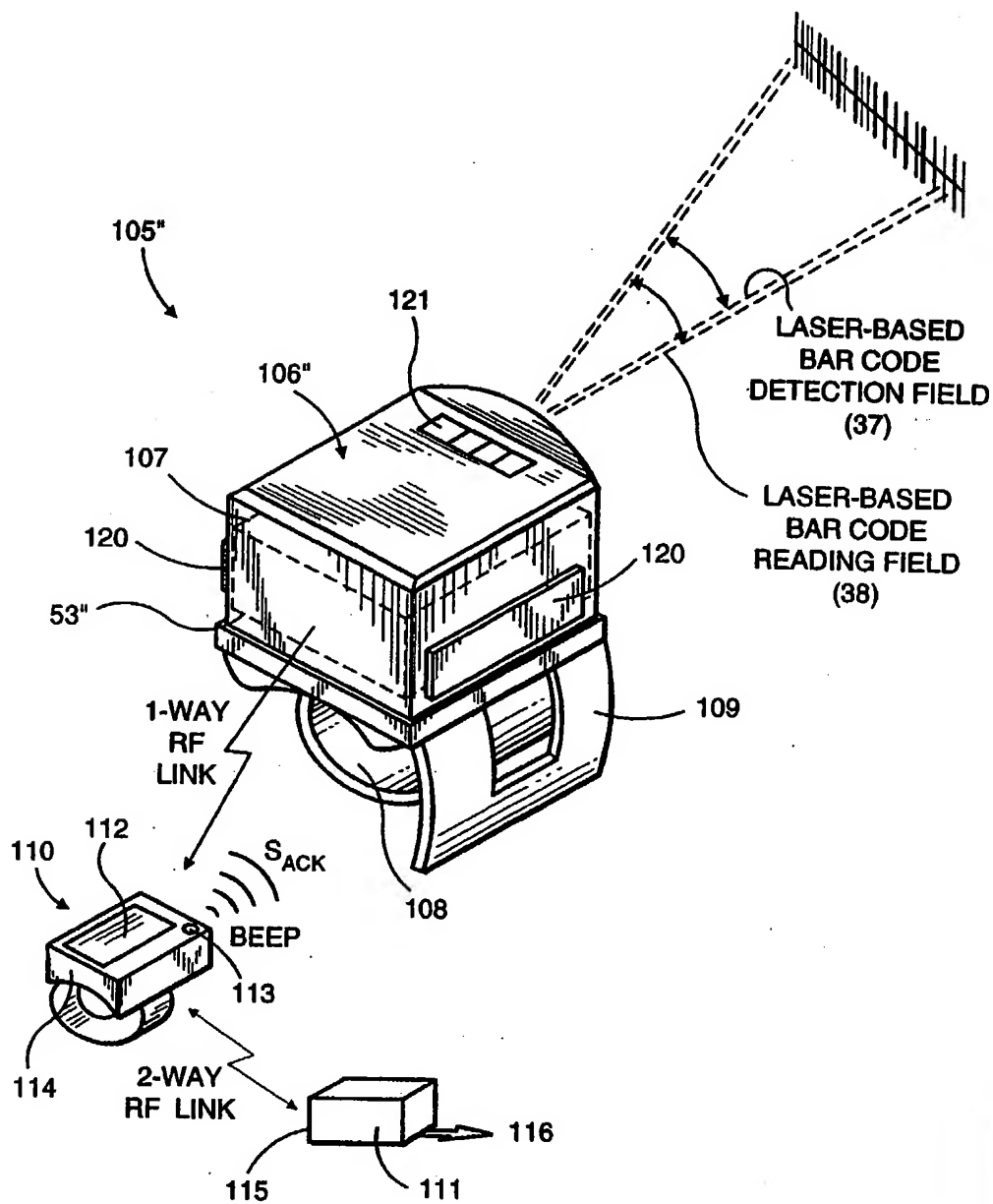


FIG. 5C

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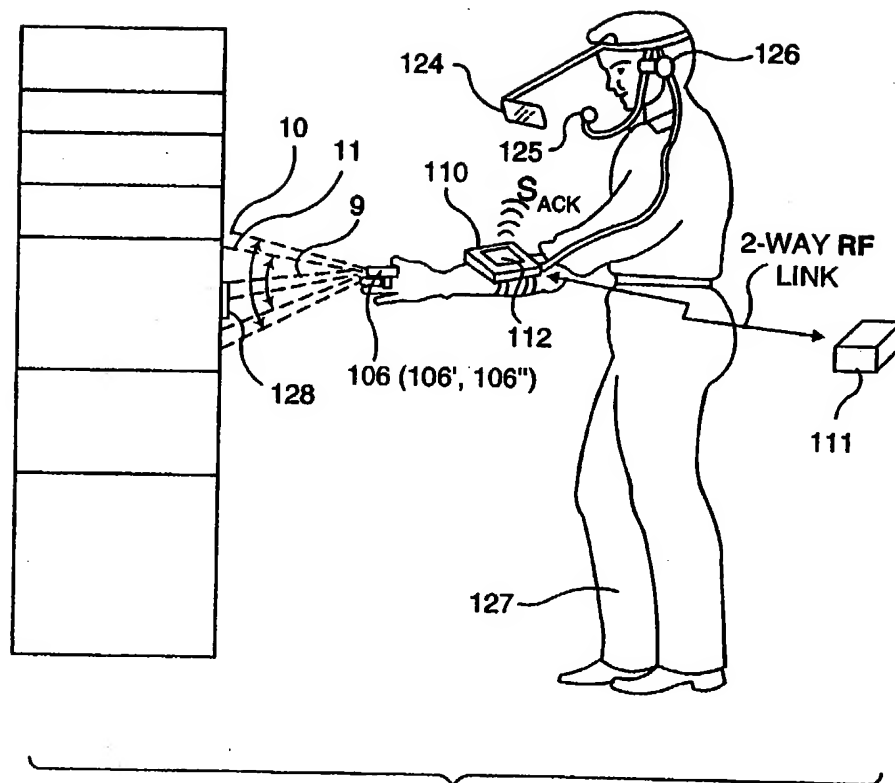
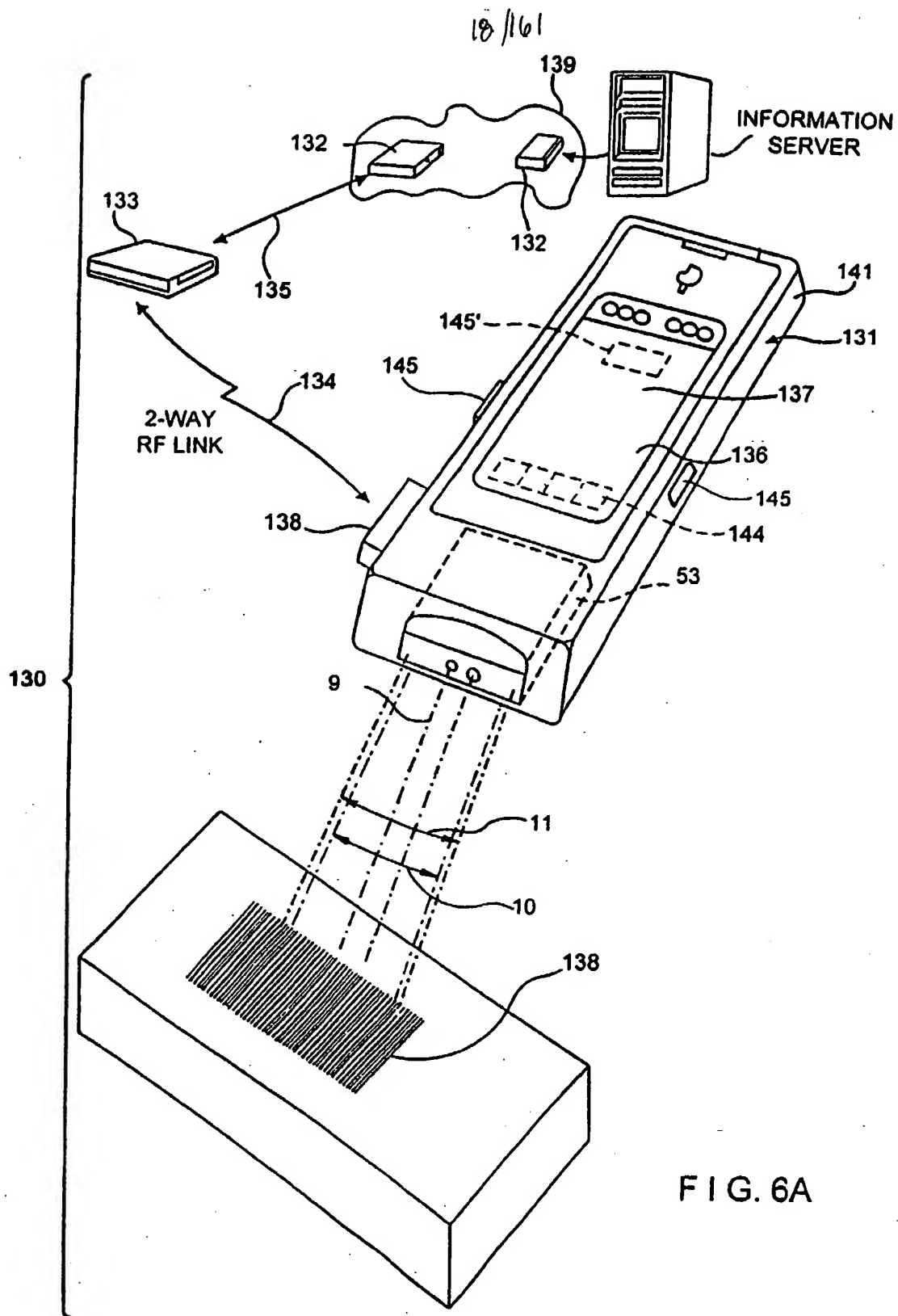
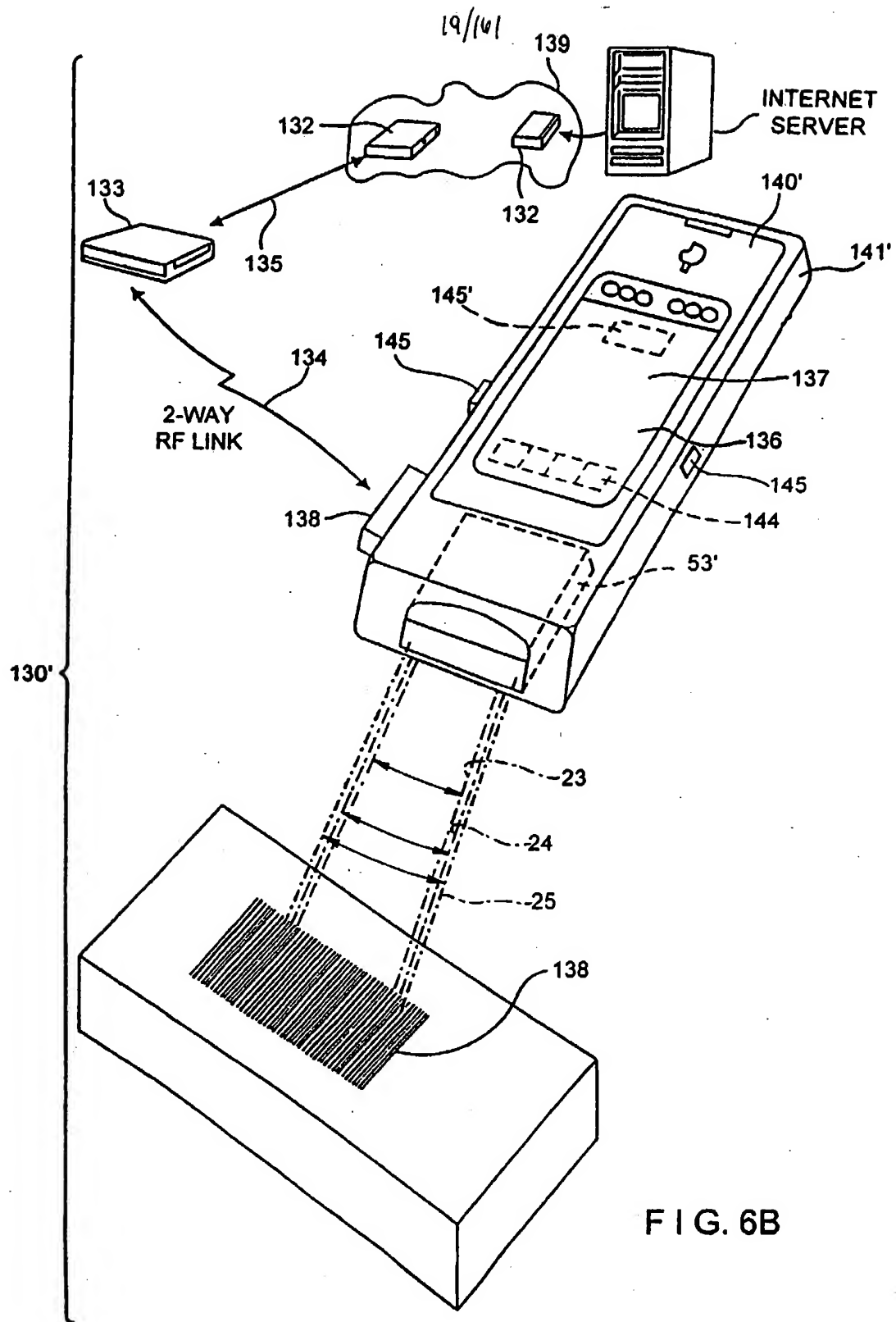


FIG. 5D





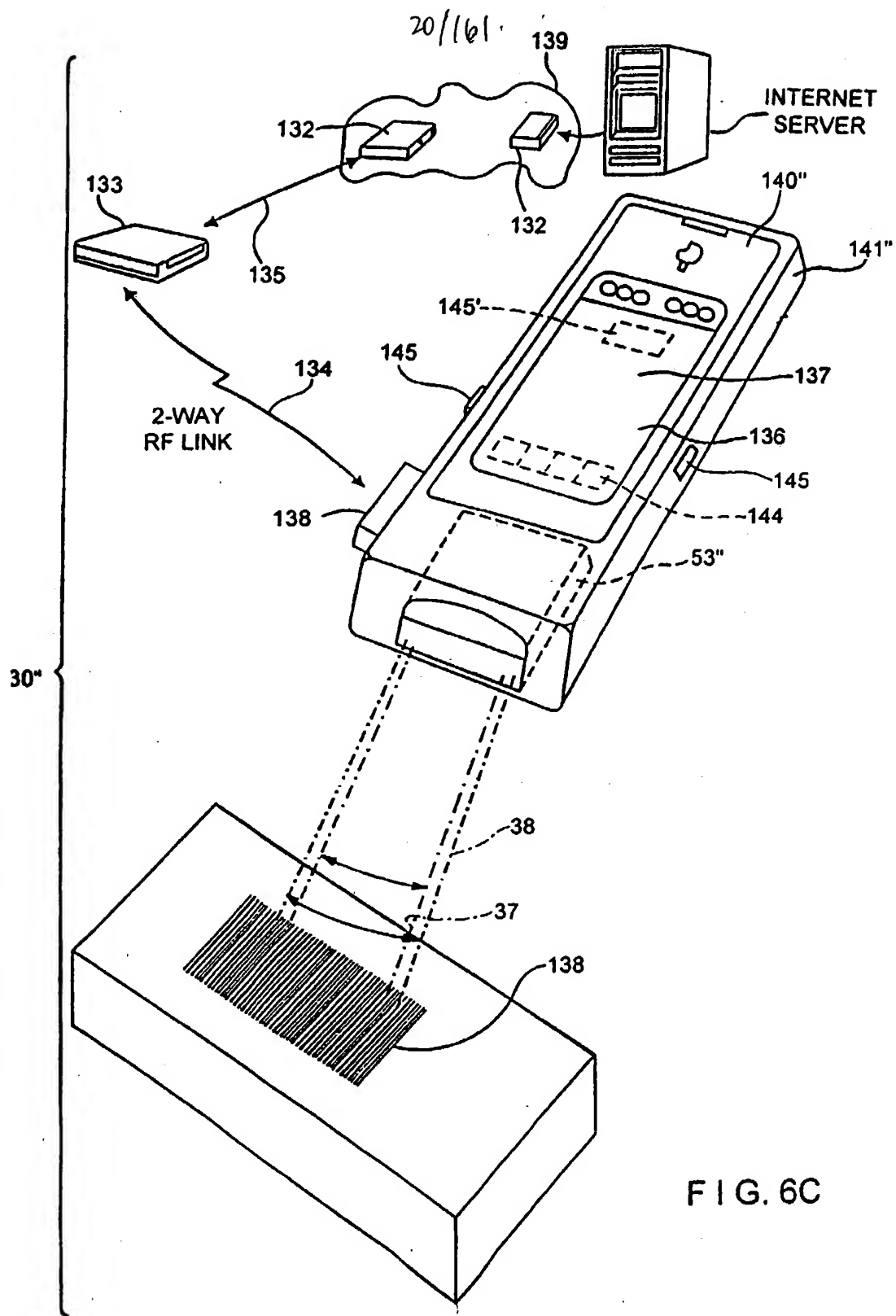


FIG. 6C



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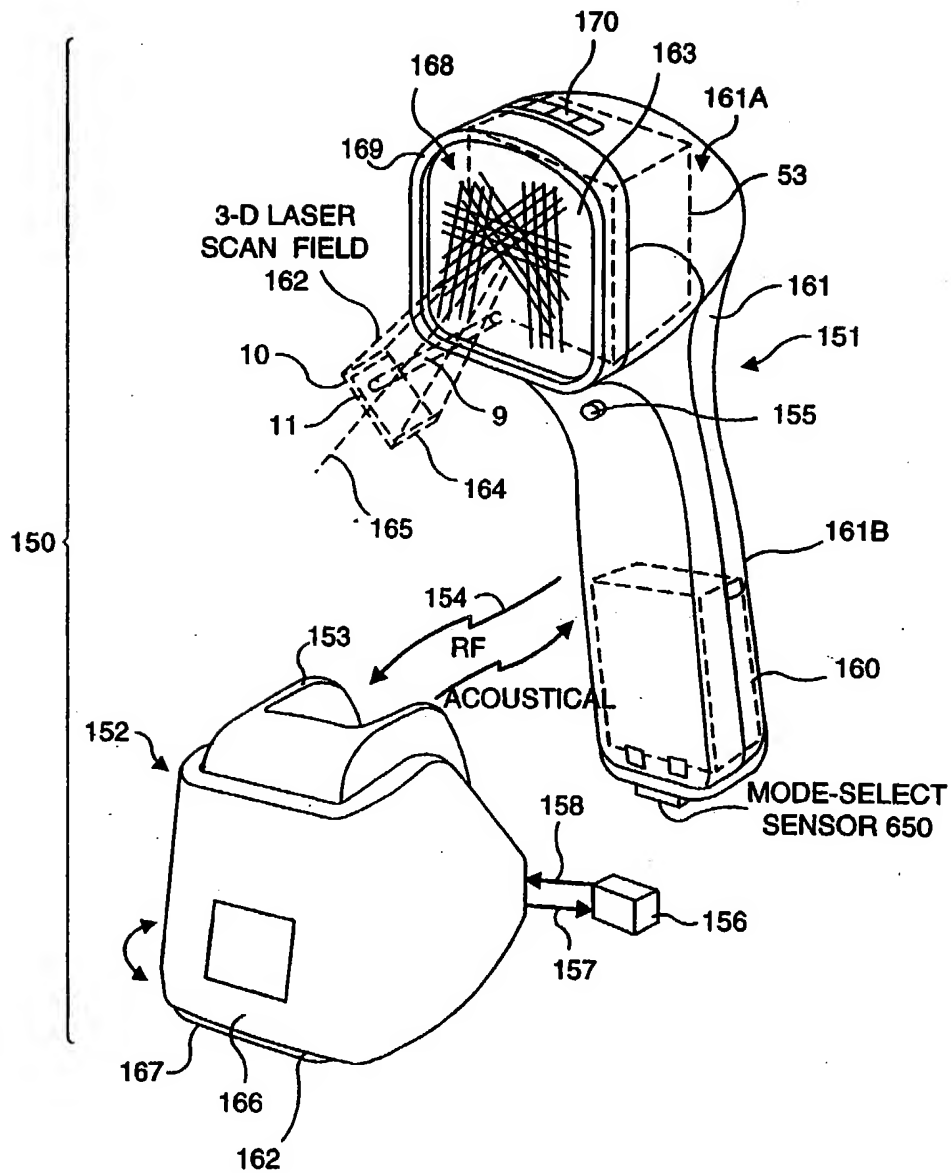


FIG. 7A

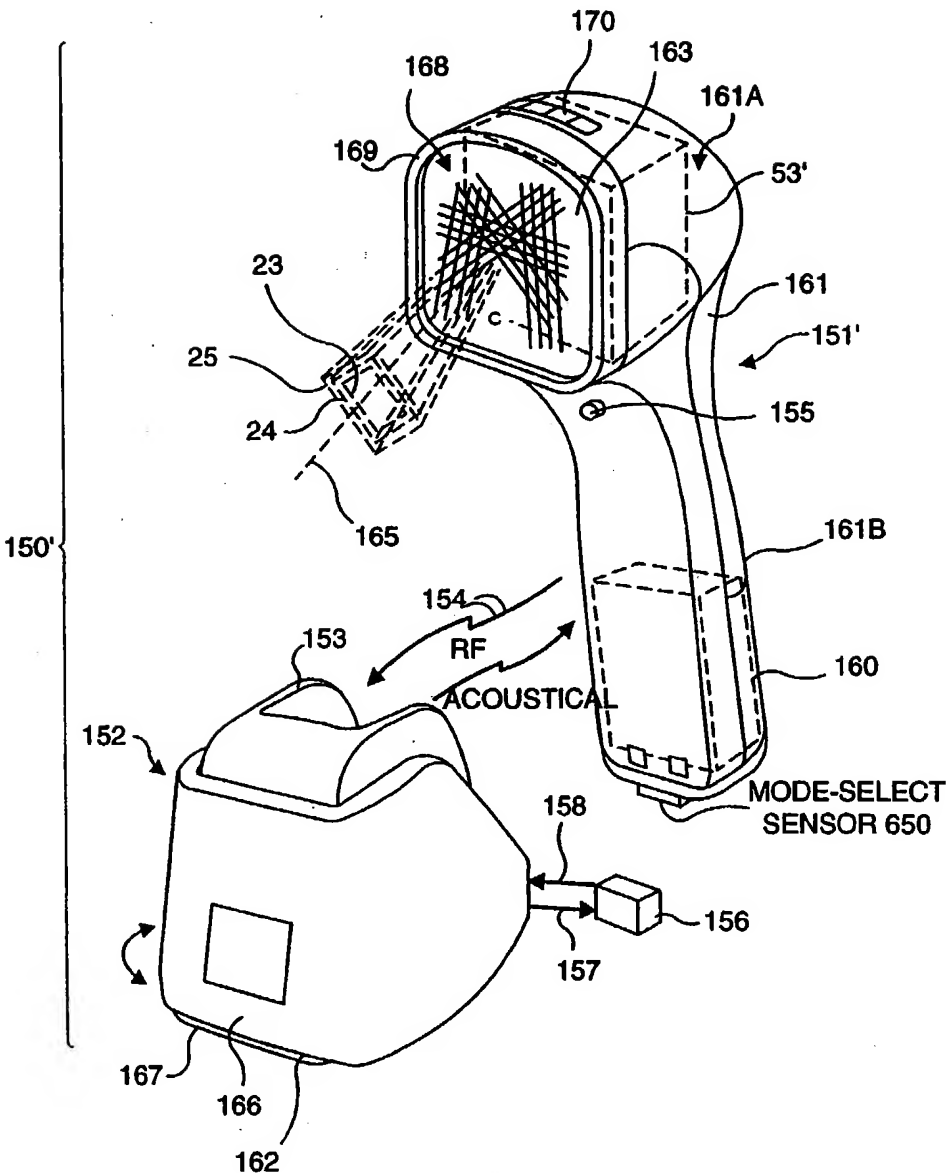


FIG. 7B

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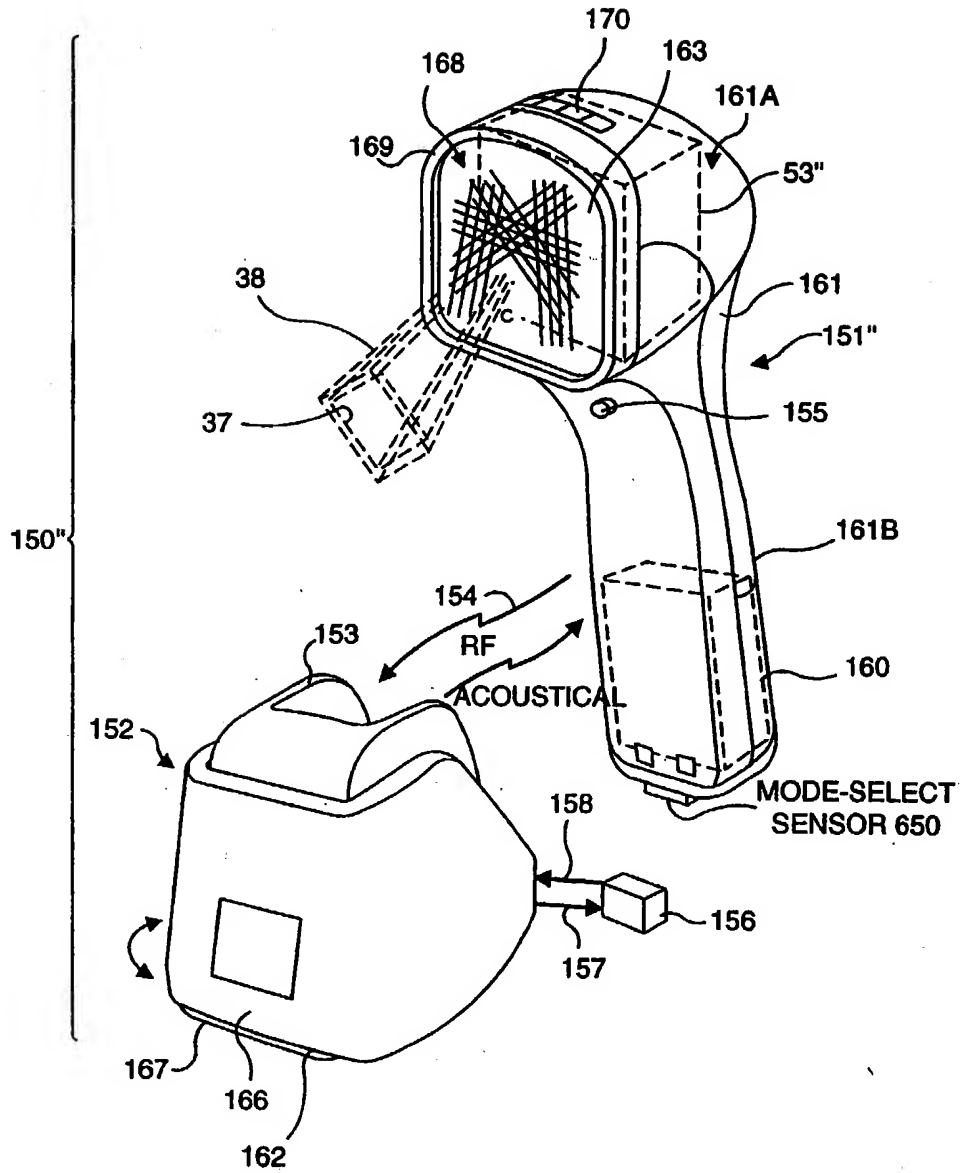


FIG. 7C

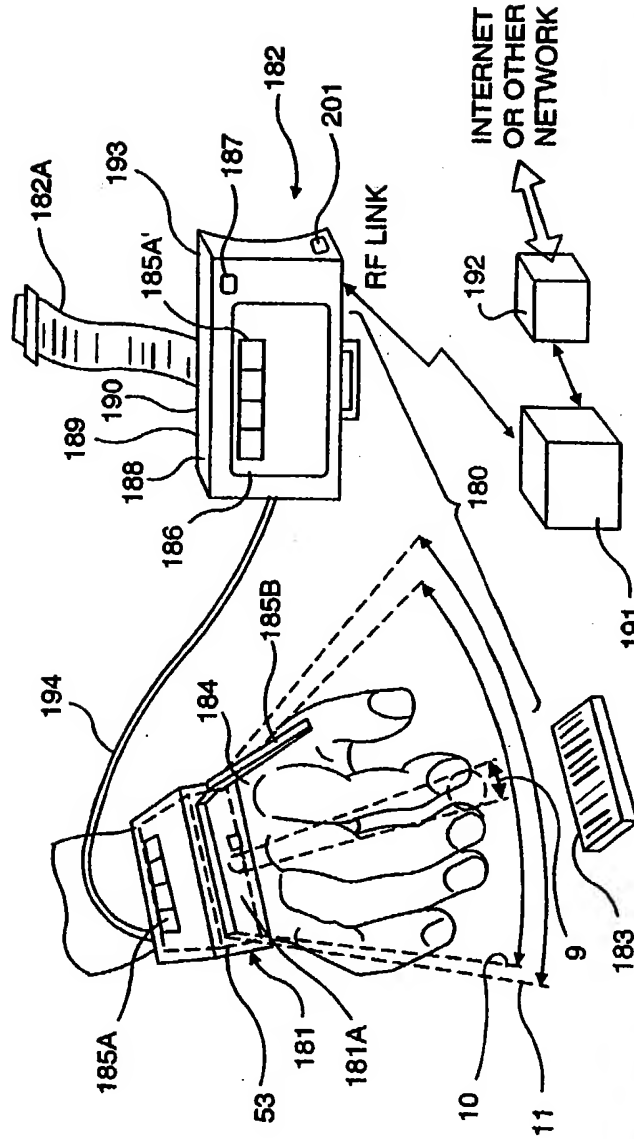


FIG. 8A

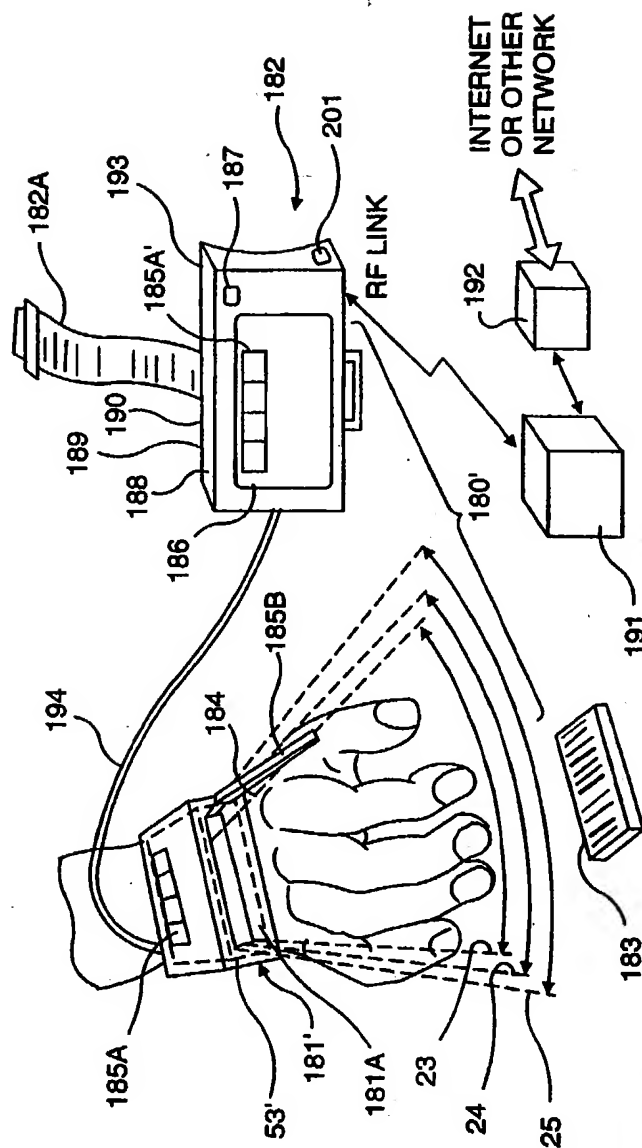


FIG. 8B

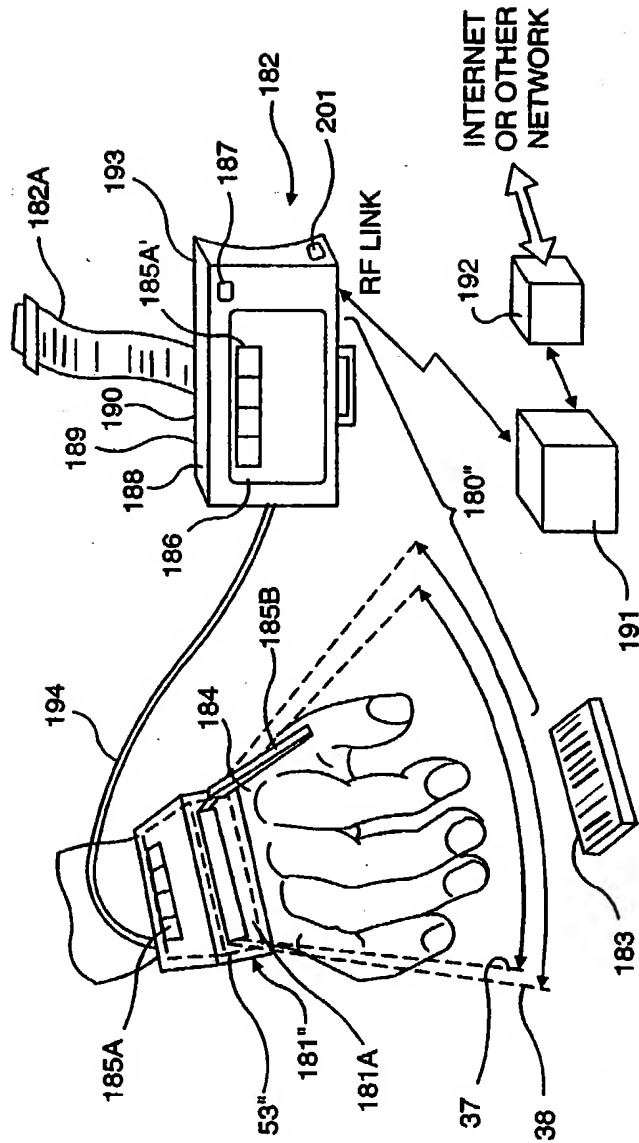


FIG. 8C

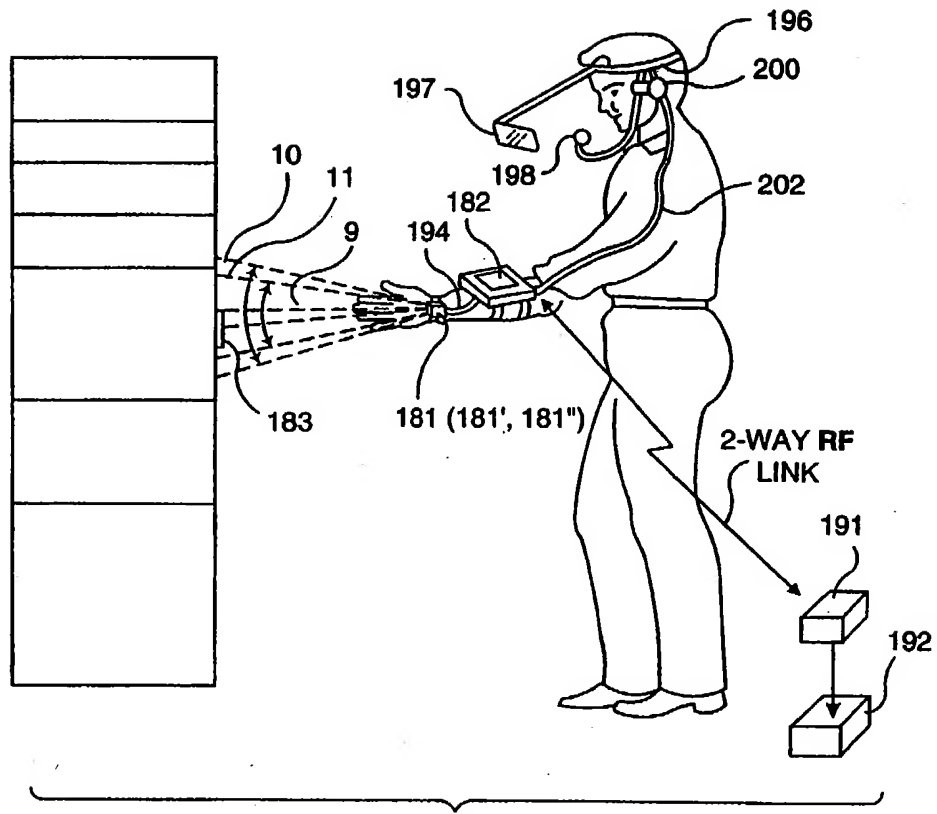
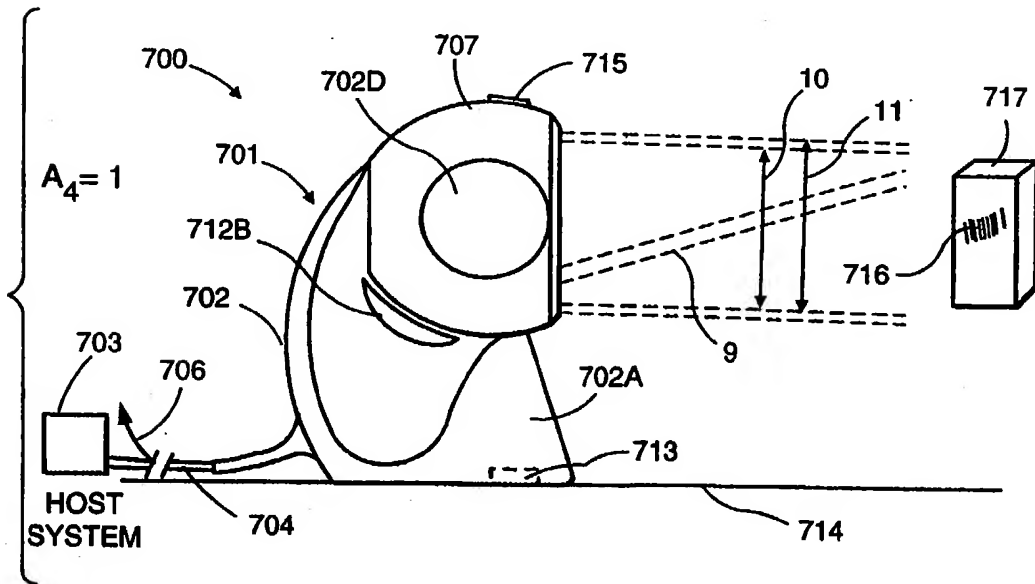
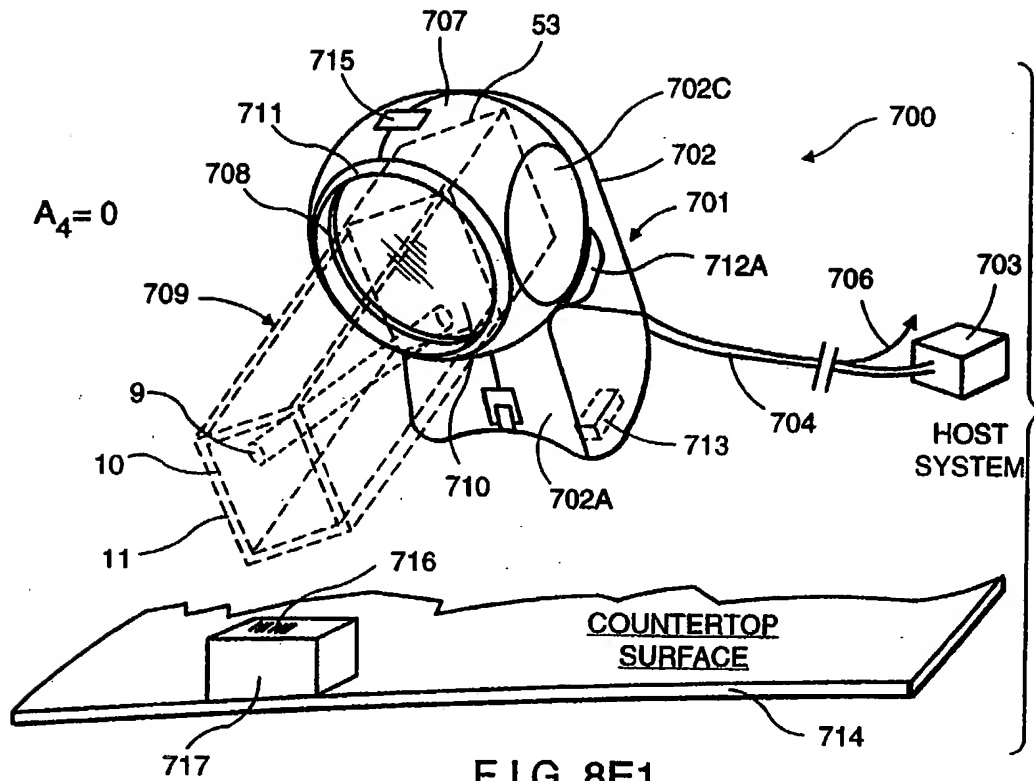


FIG. 8D

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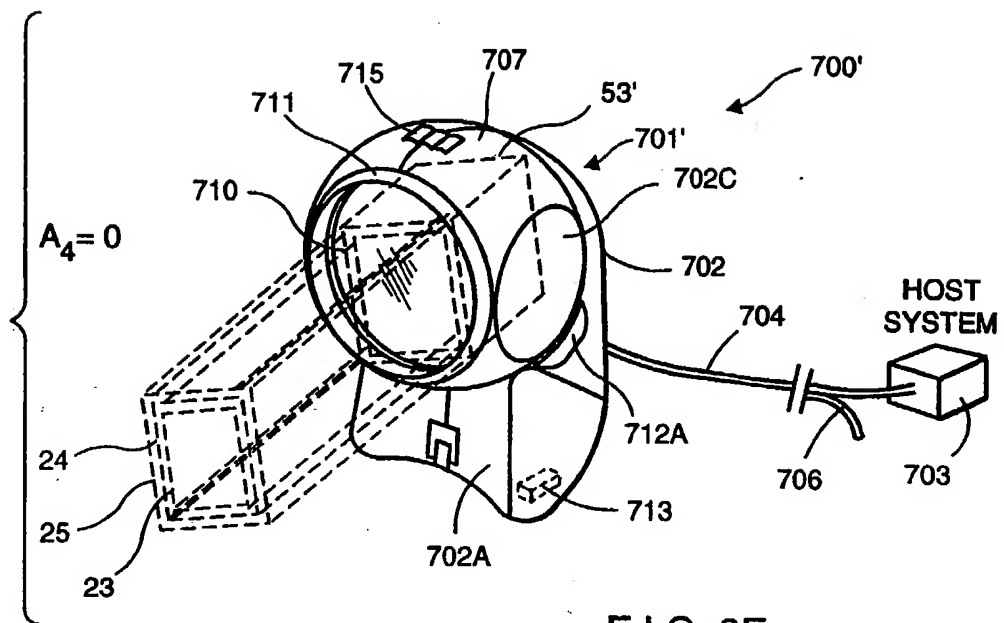


FIG. 8F

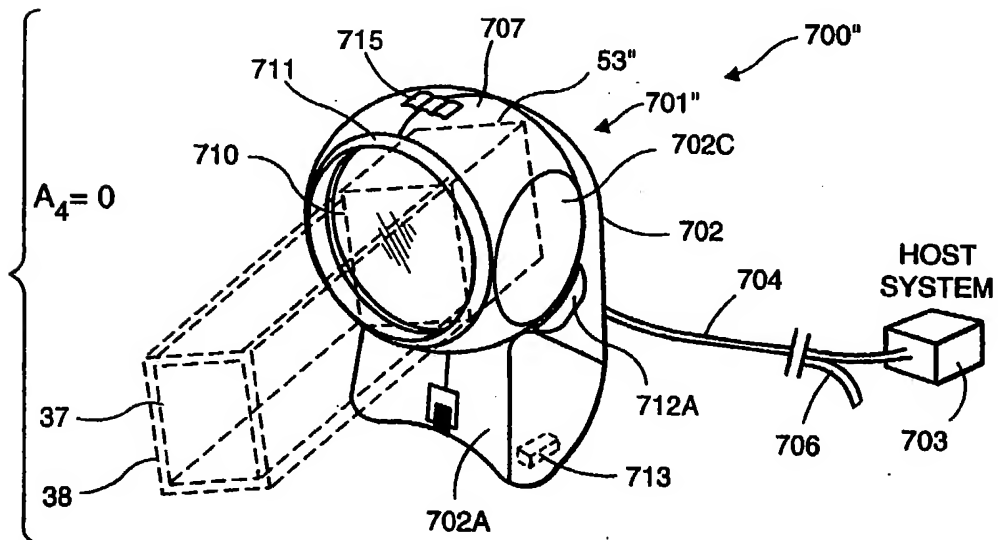


FIG. 8G

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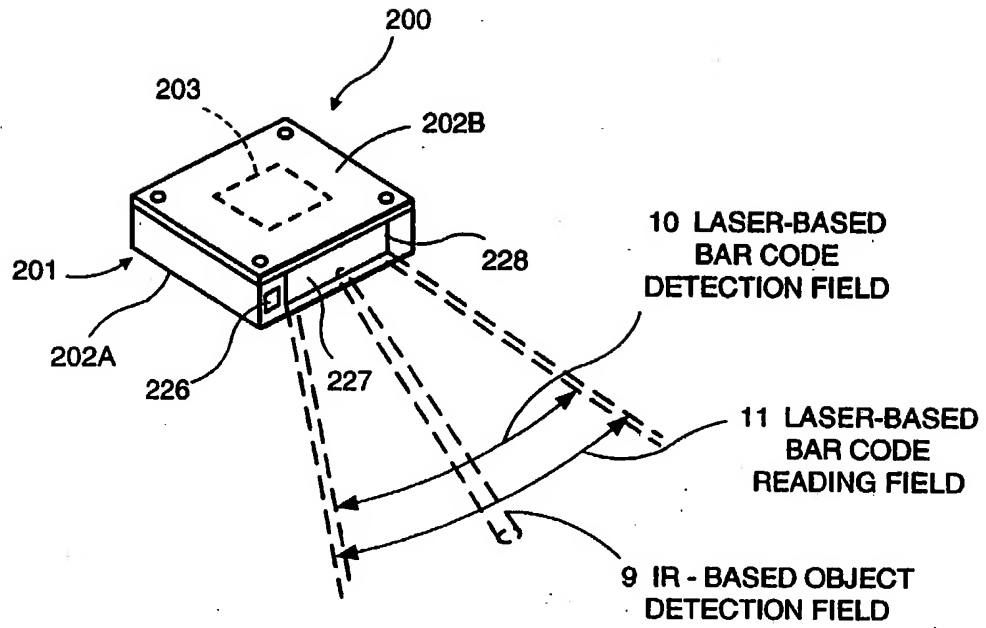


FIG. 9A

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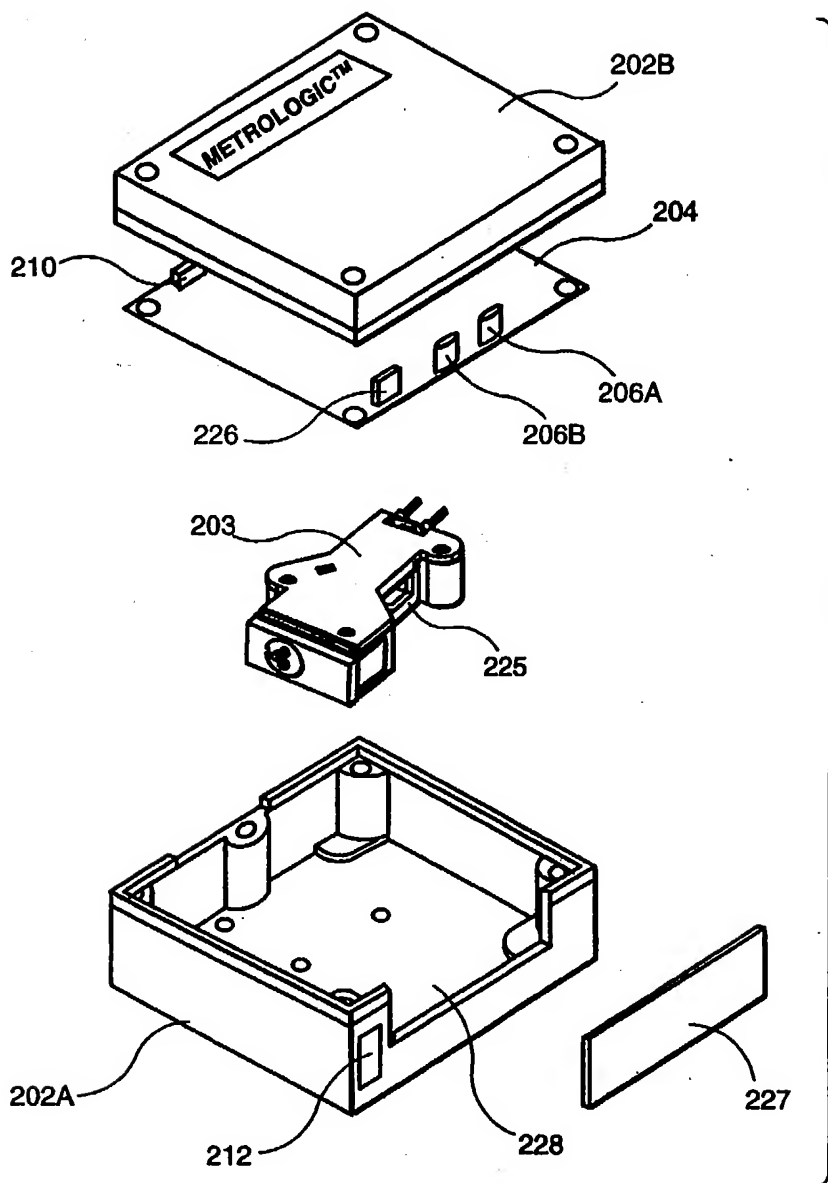


FIG. 9B

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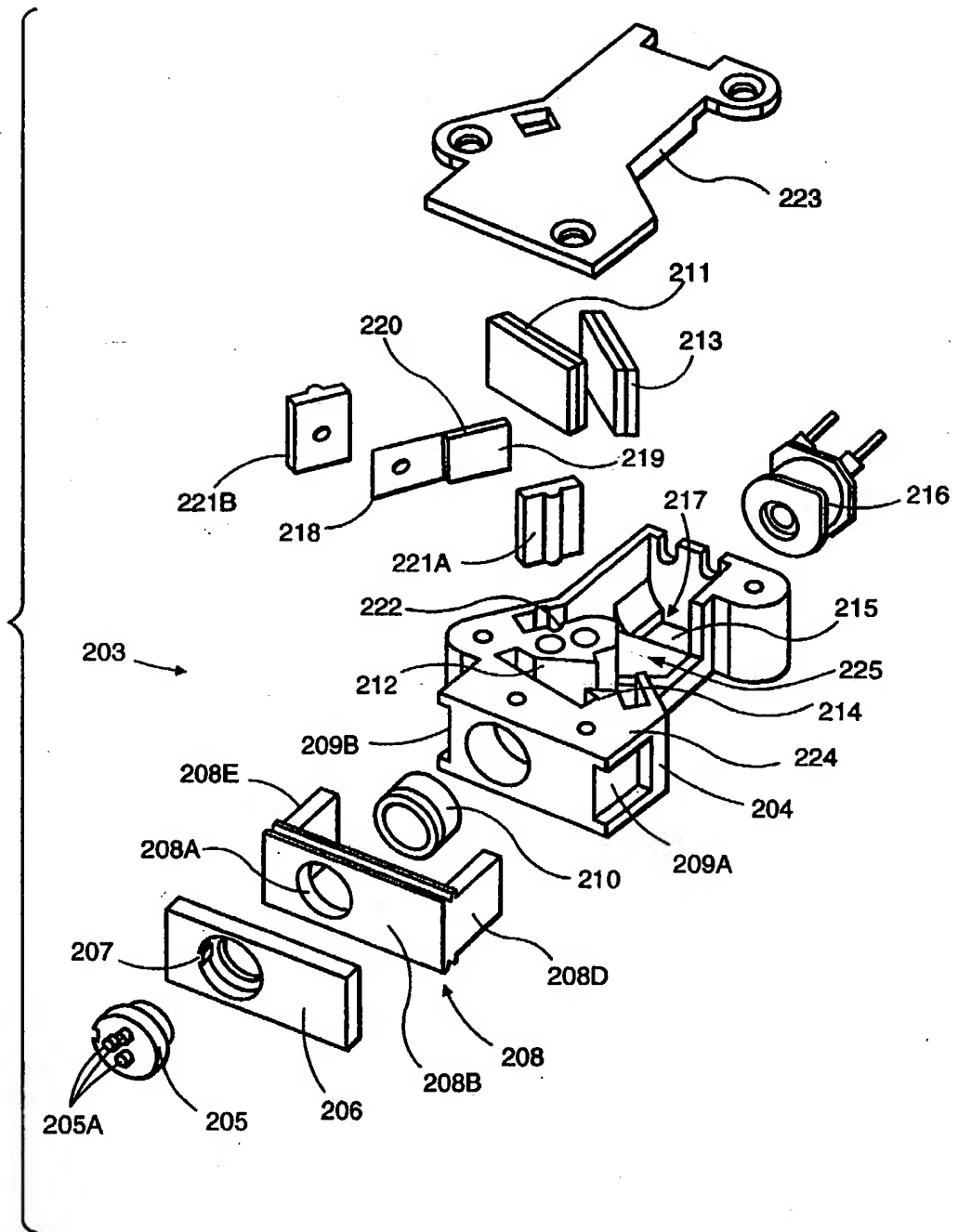


FIG. 9C

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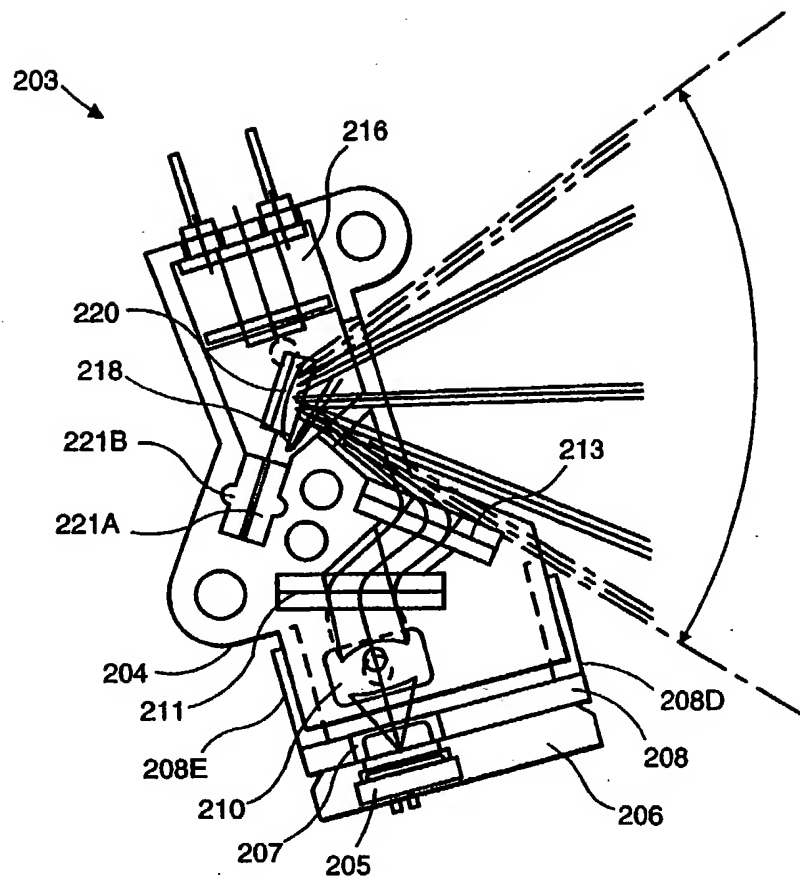


FIG. 9D

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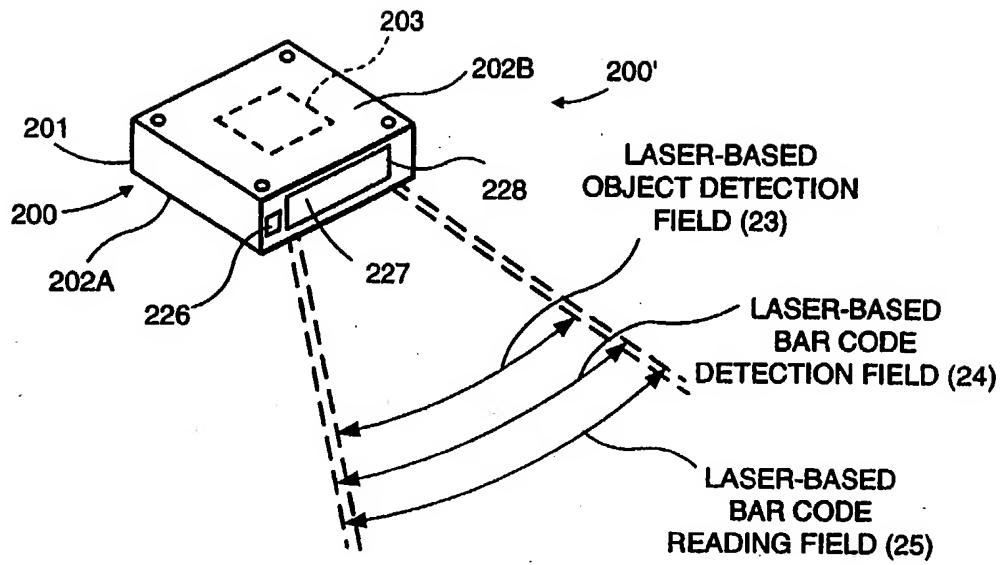


FIG. 9E

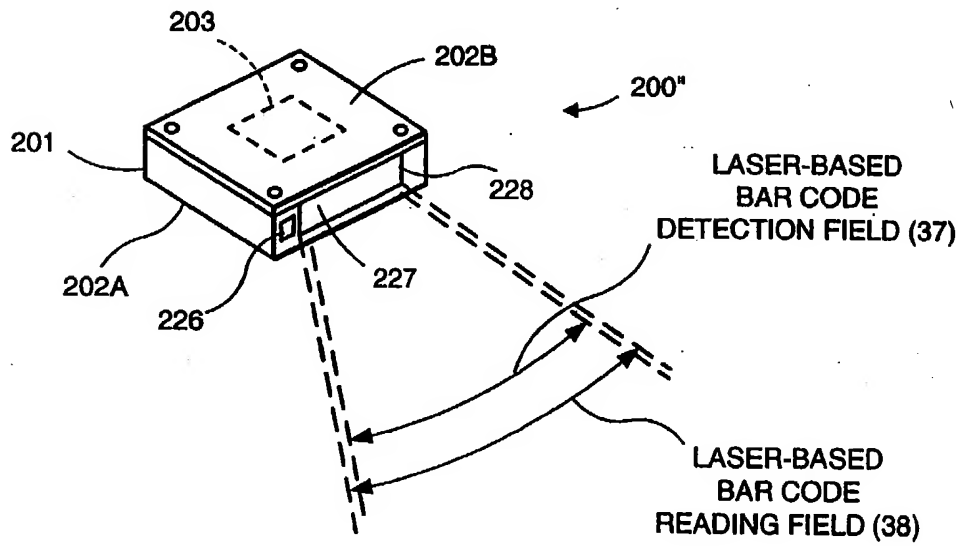


FIG. 9F

FIG. 10A

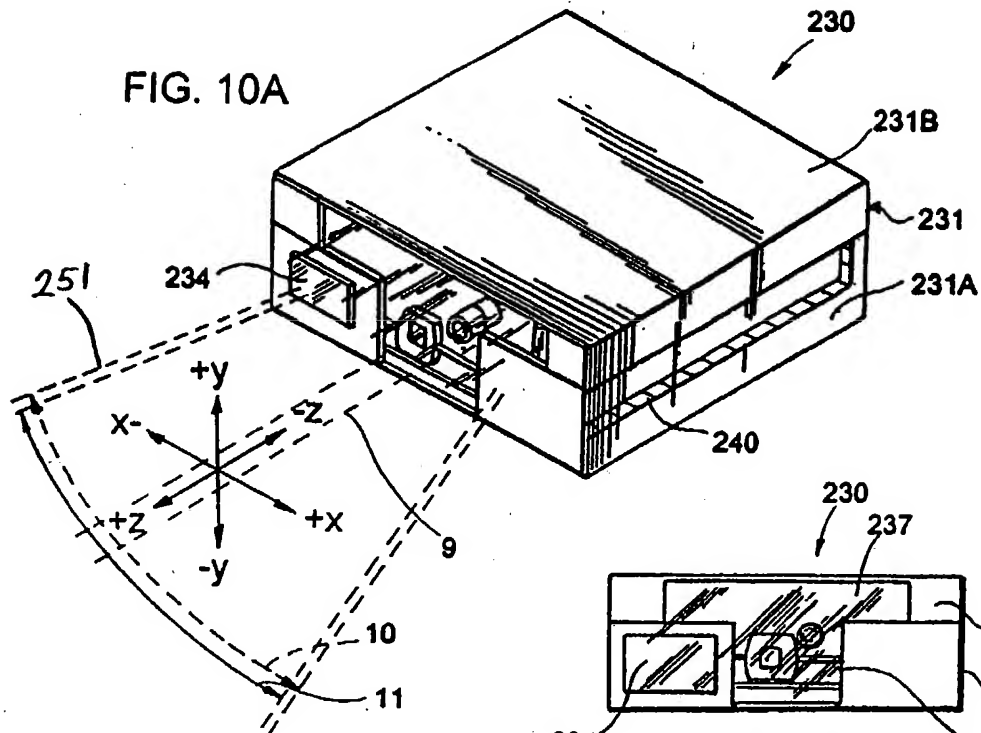


FIG. 10B

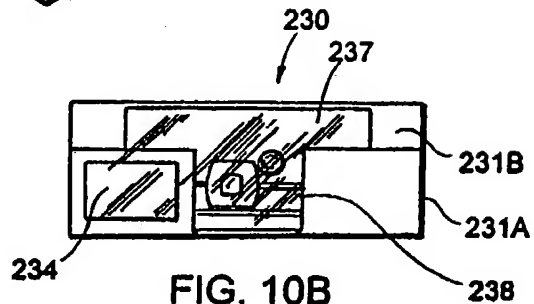


FIG. 10C

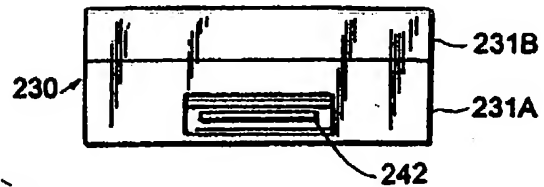
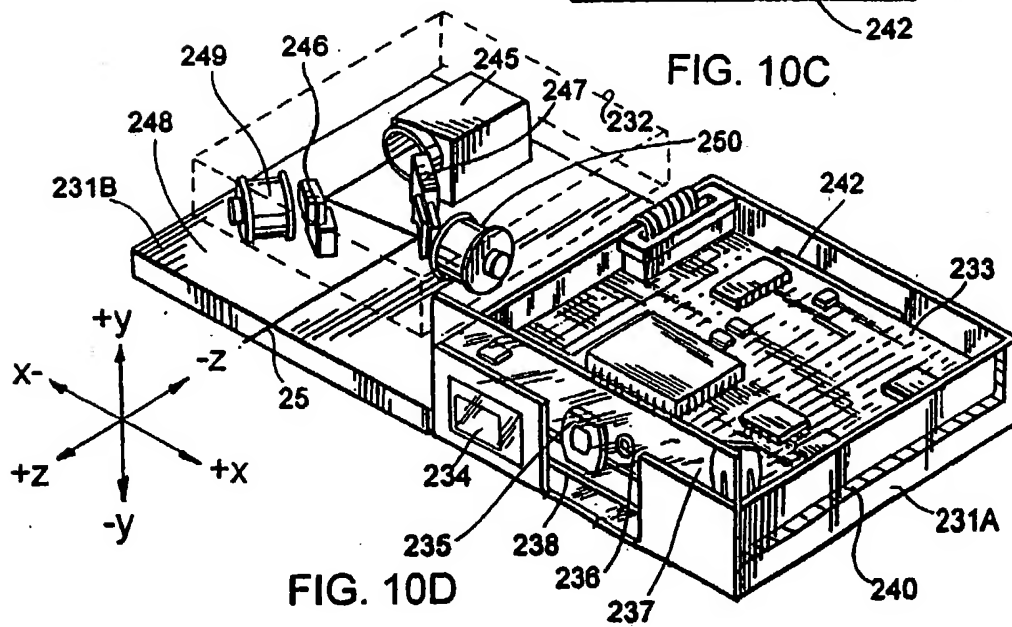


FIG. 10D



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FIG. 10E

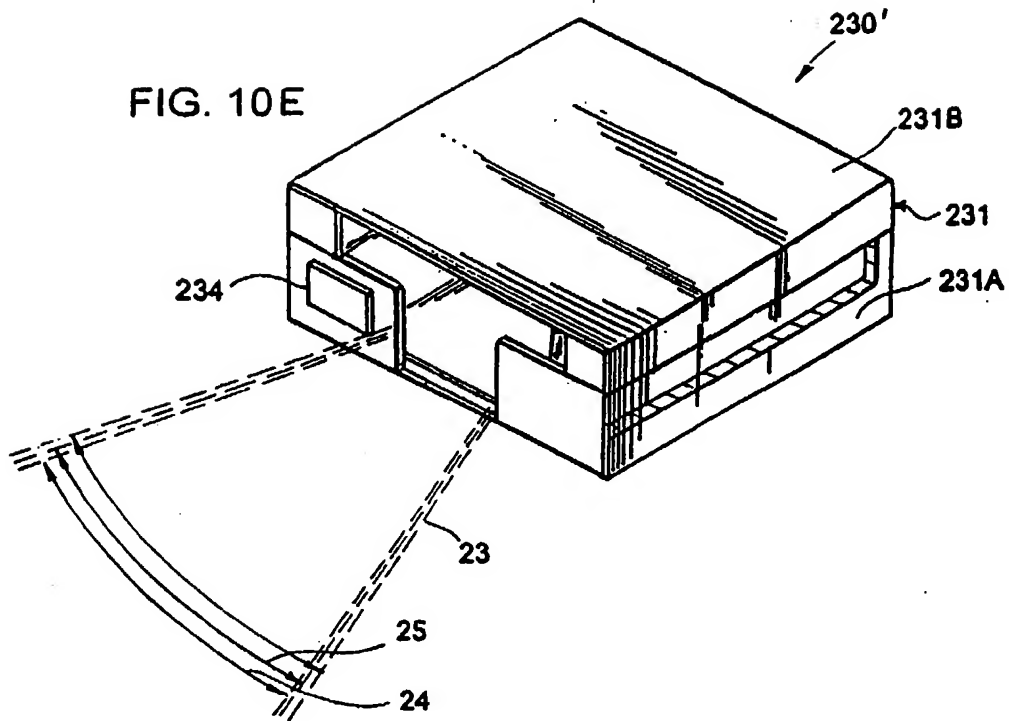
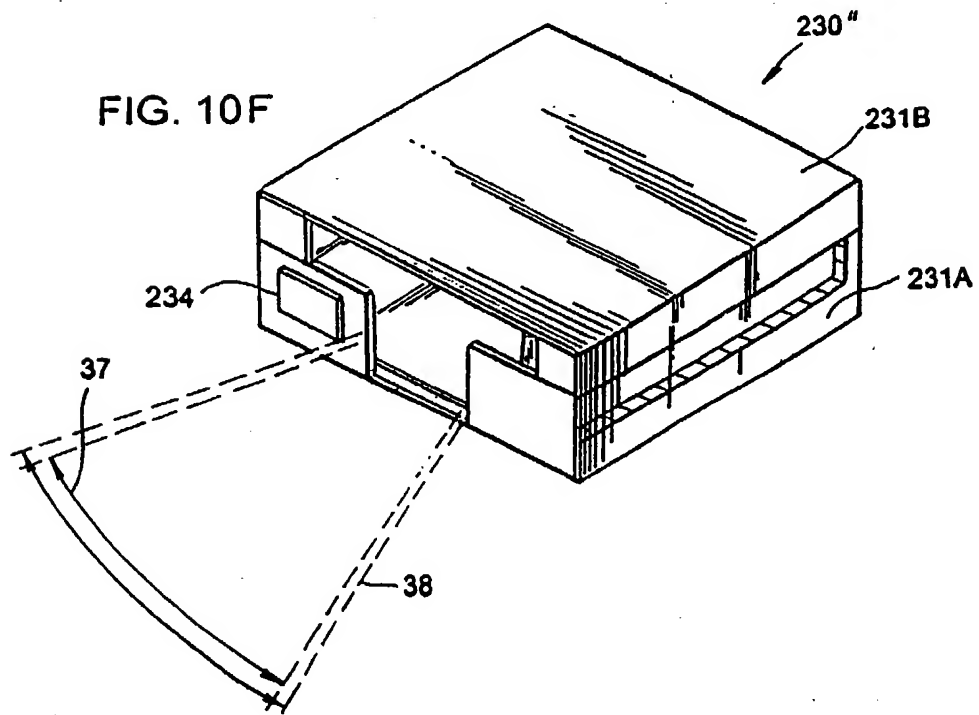


FIG. 10F





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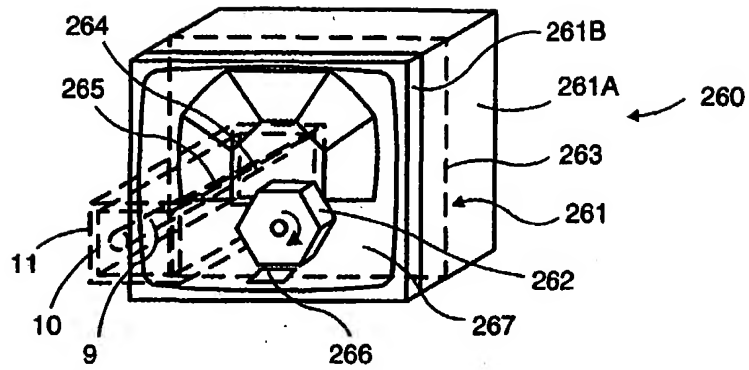


FIG. 11A

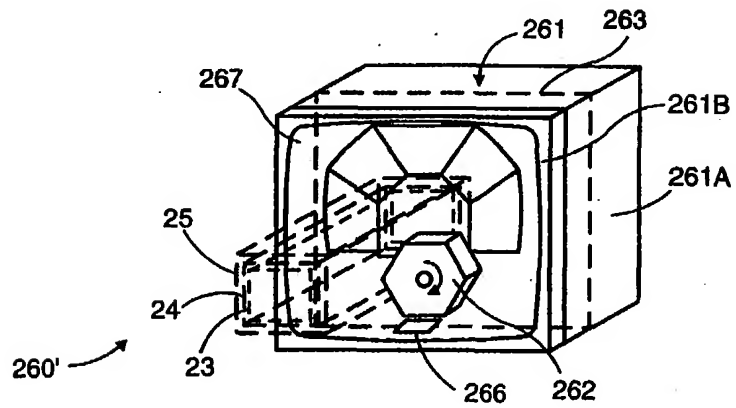


FIG. 11B

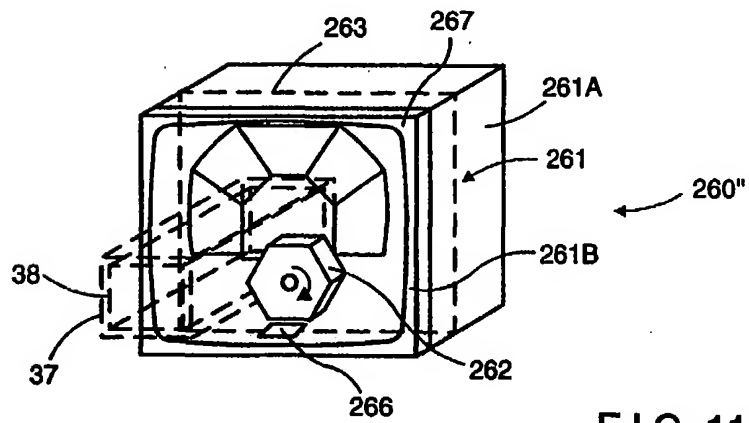


FIG. 11C

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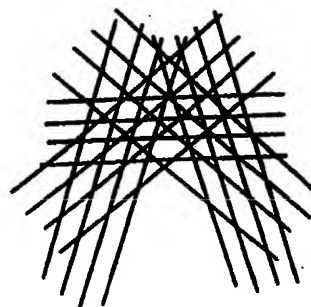


FIG. 12A

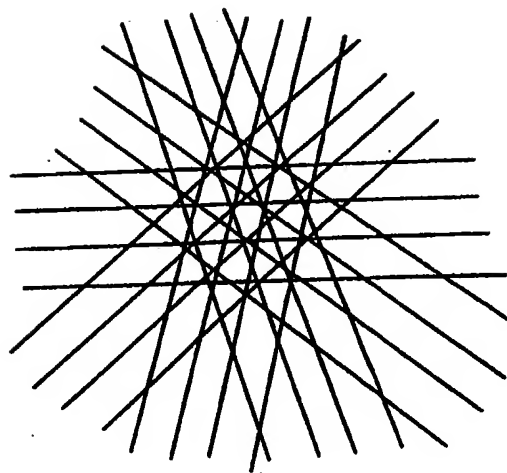
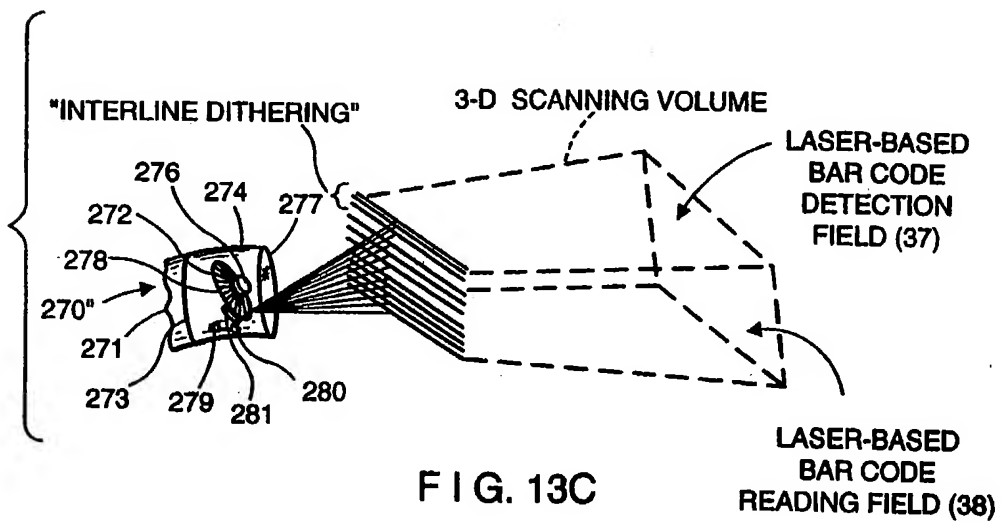
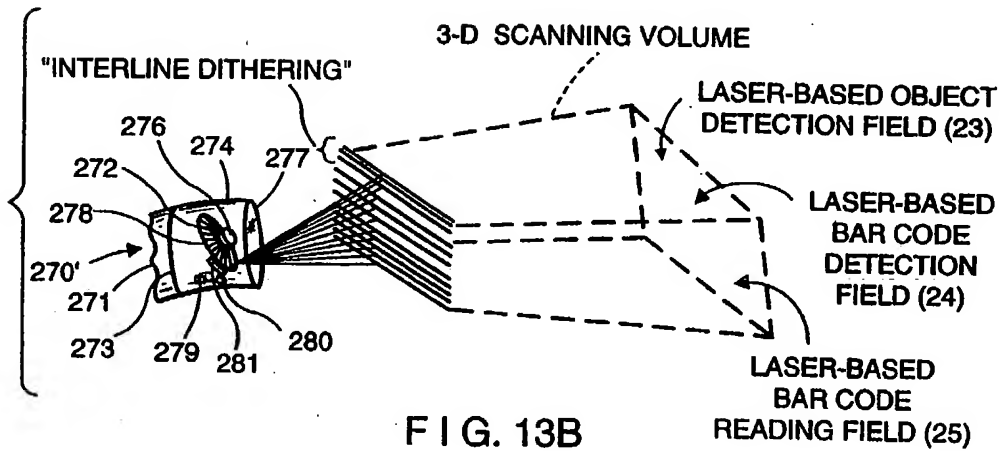
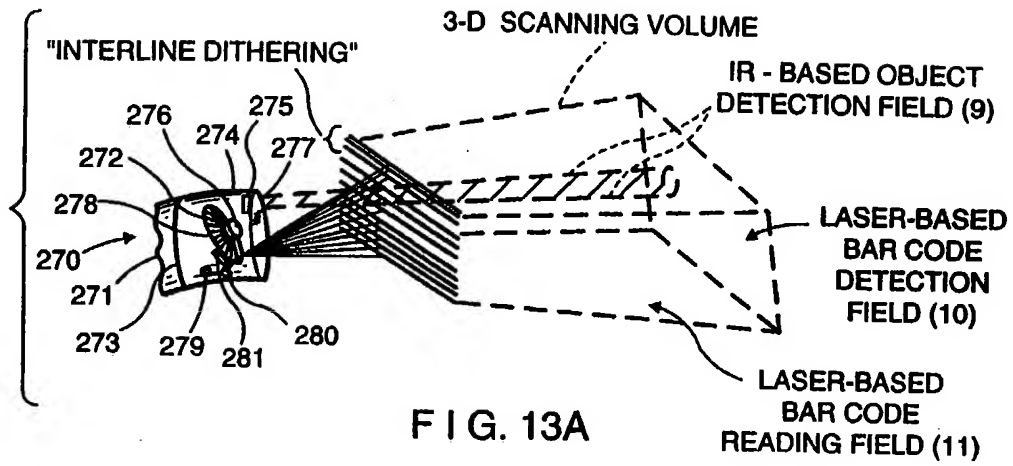


FIG. 12B

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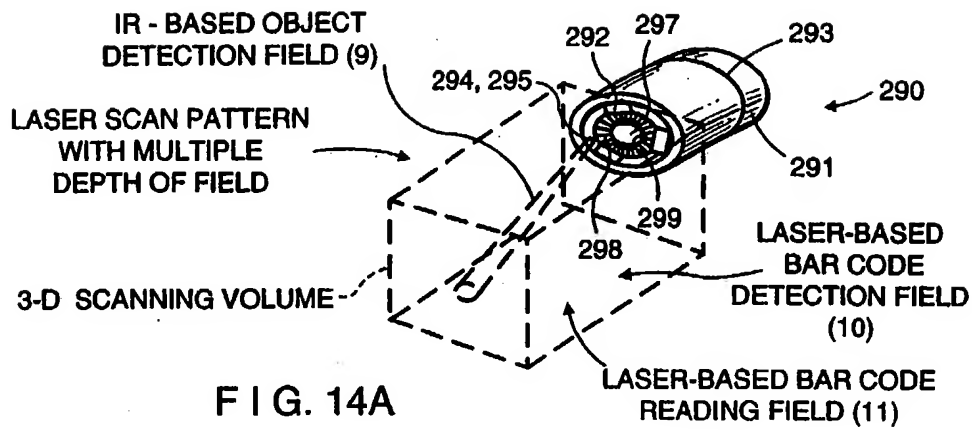


FIG. 14A

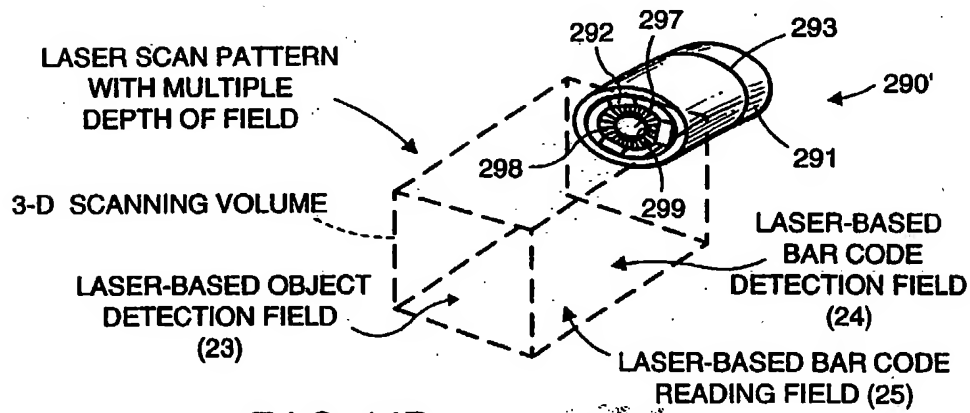


FIG. 14B

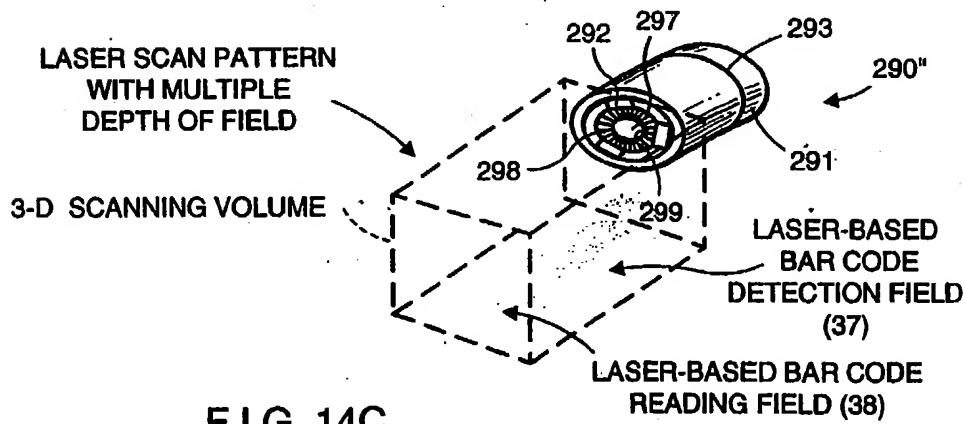


FIG. 14C

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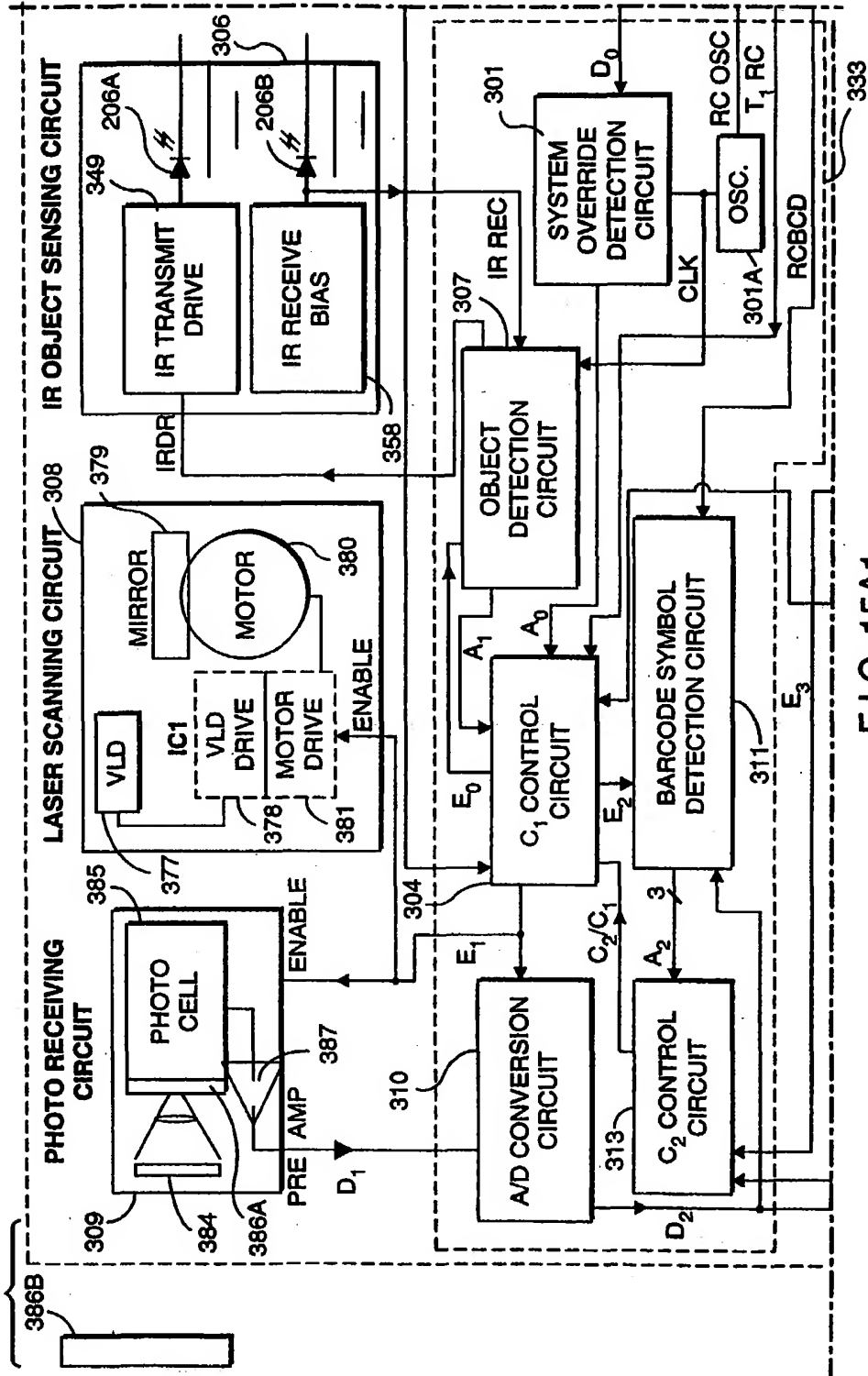


FIG. 15A1

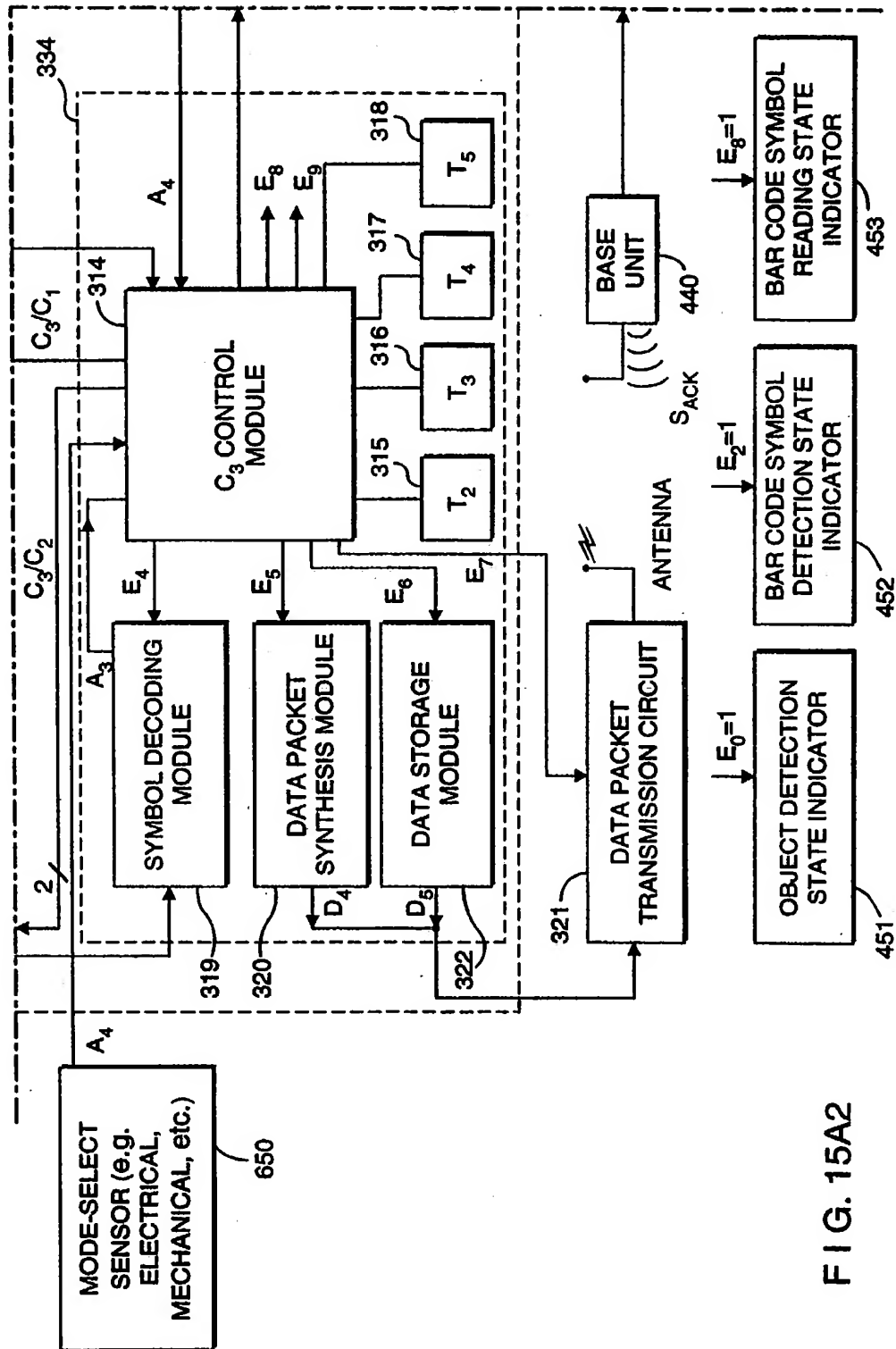


FIG. 15A2

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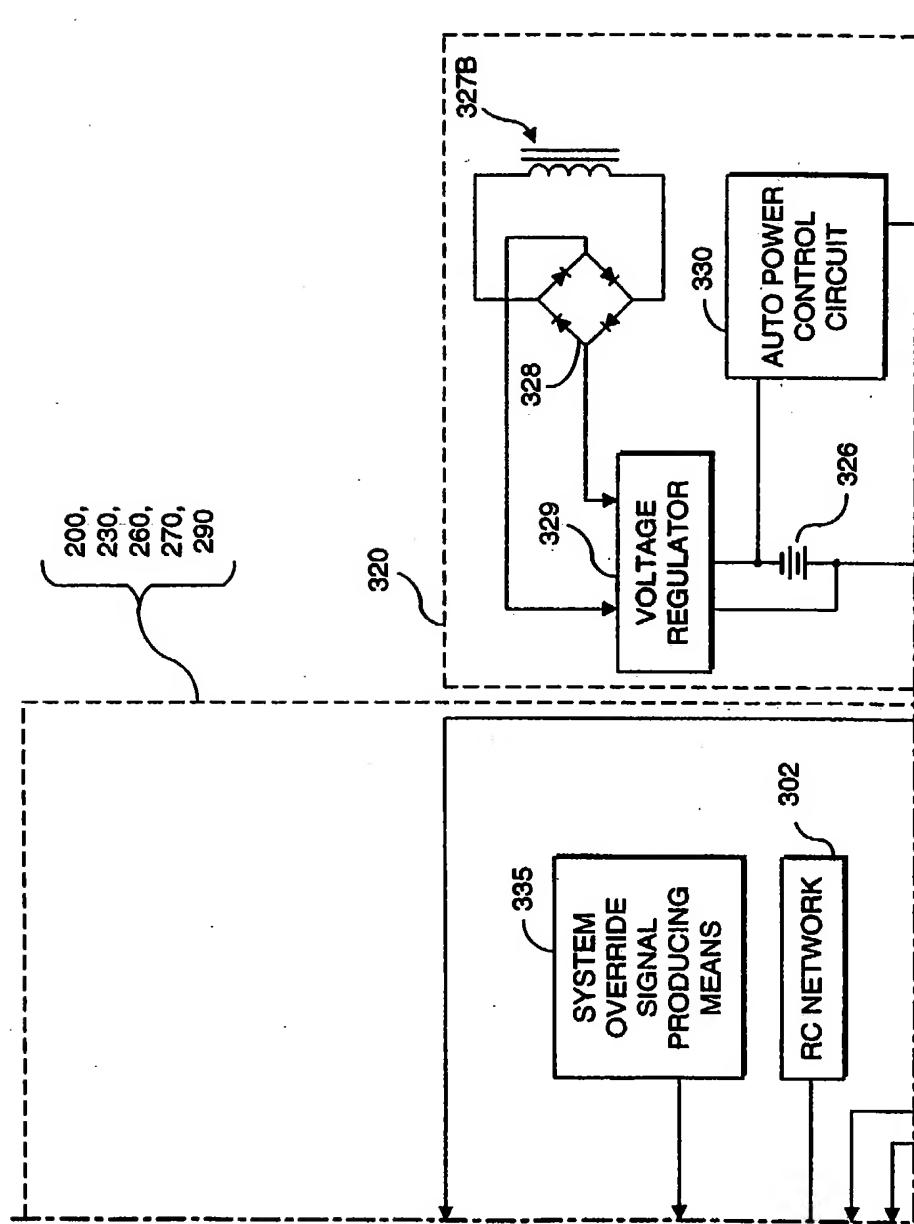


FIG. 15A3

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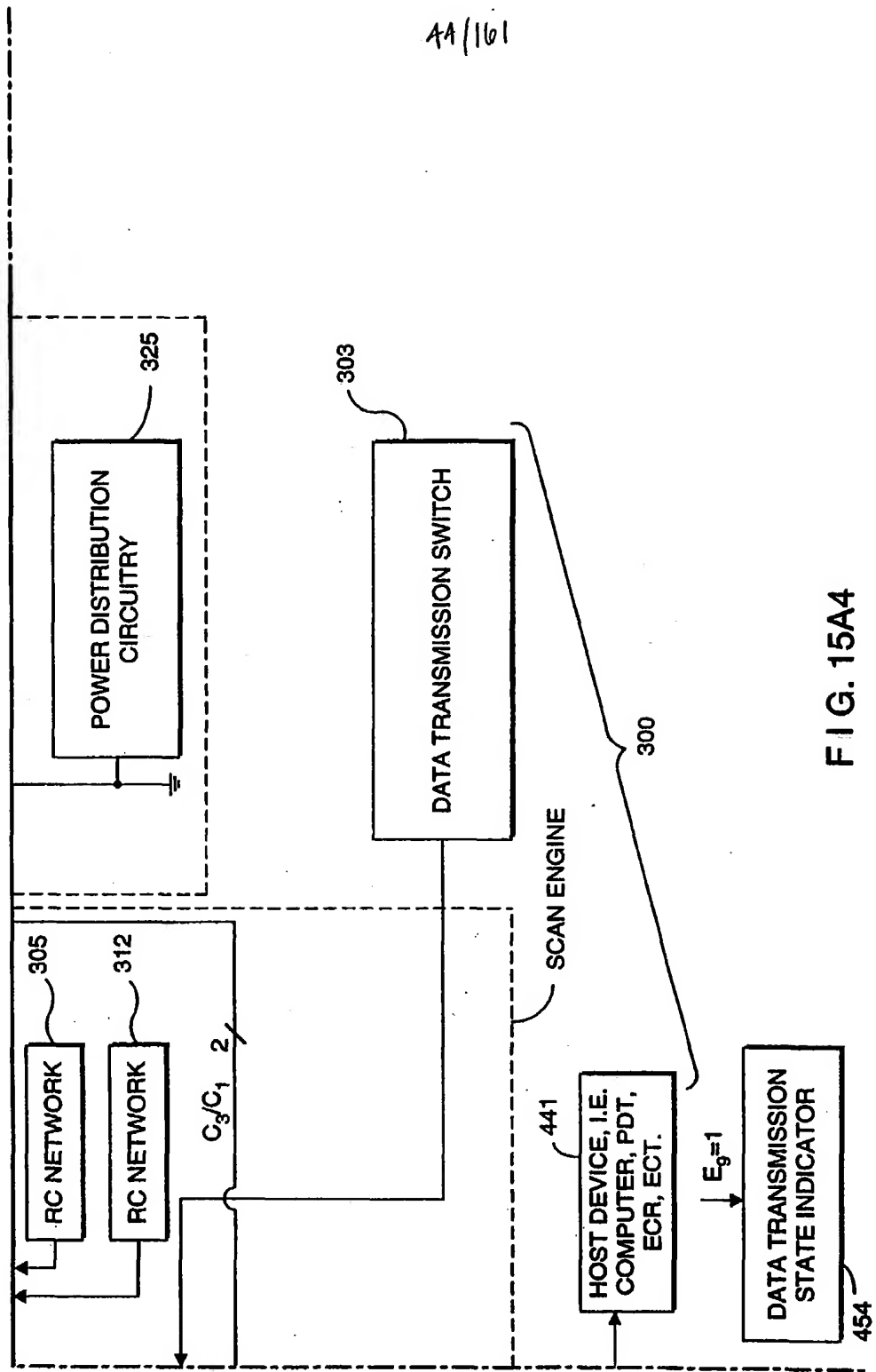


FIG. 15A4



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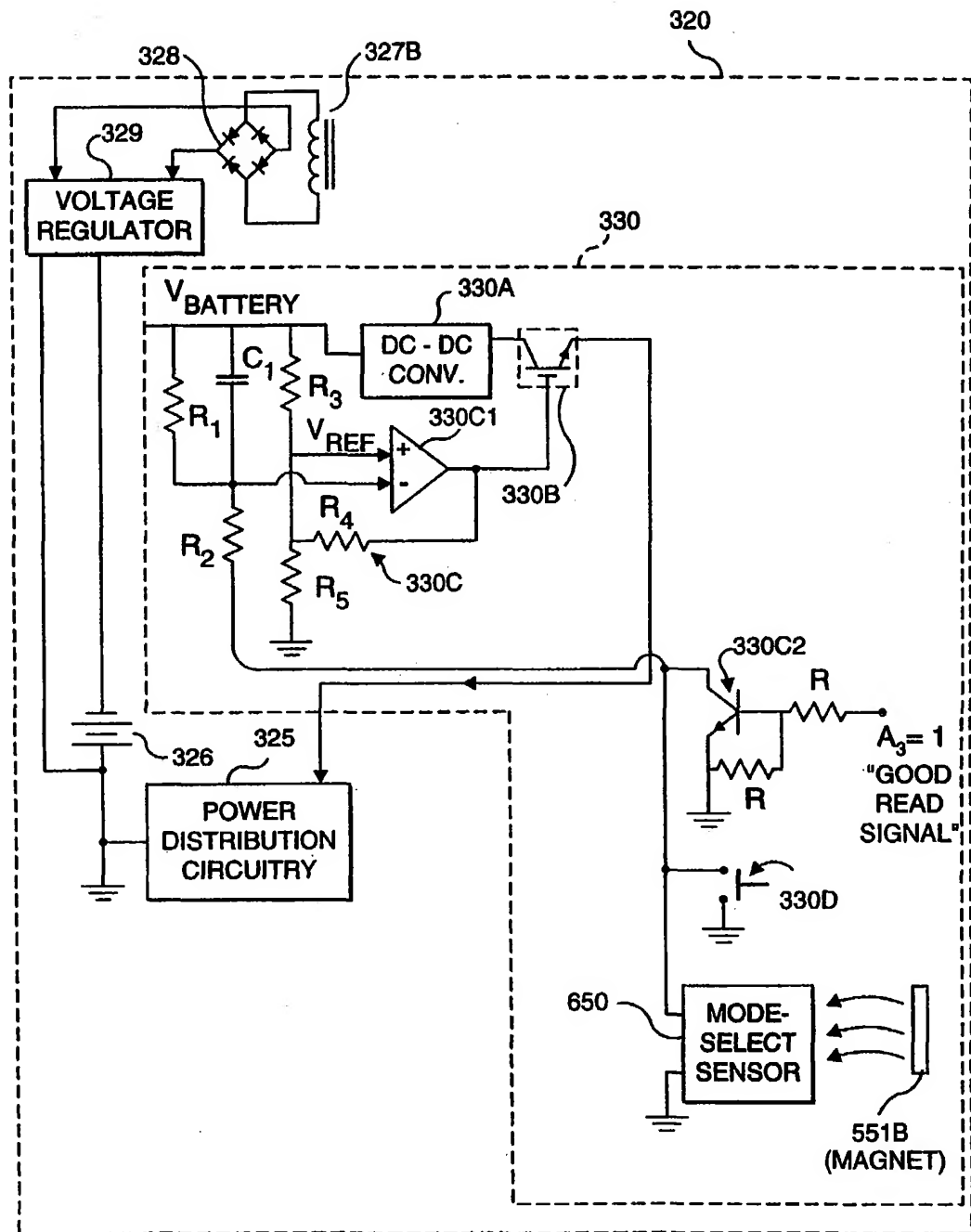


FIG. 15B1

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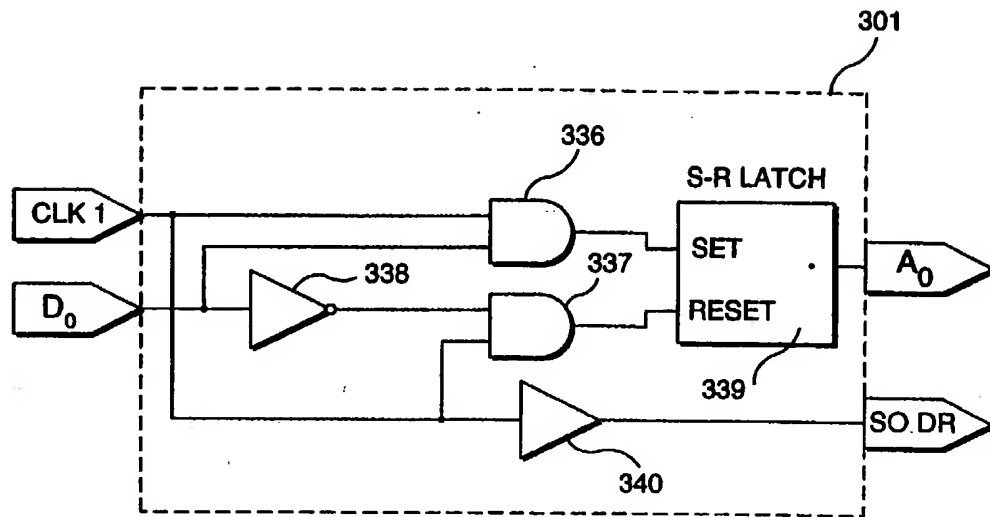


FIG. 15B2

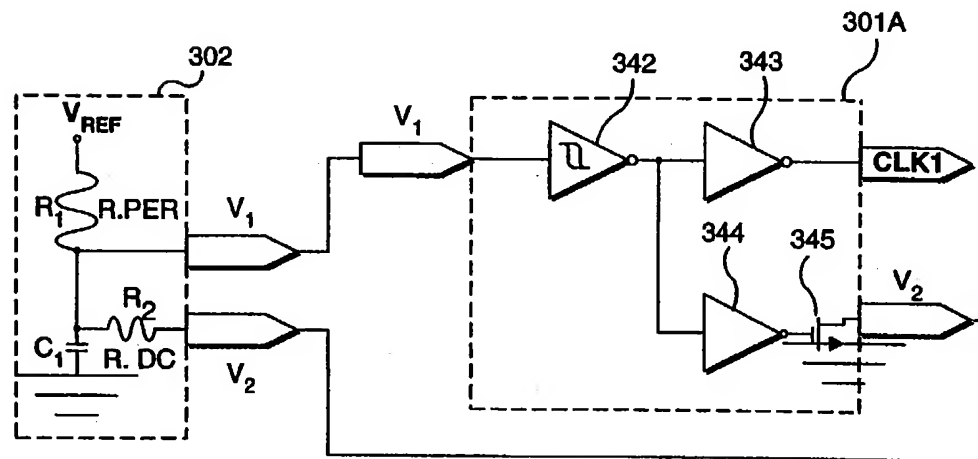


FIG. 15C

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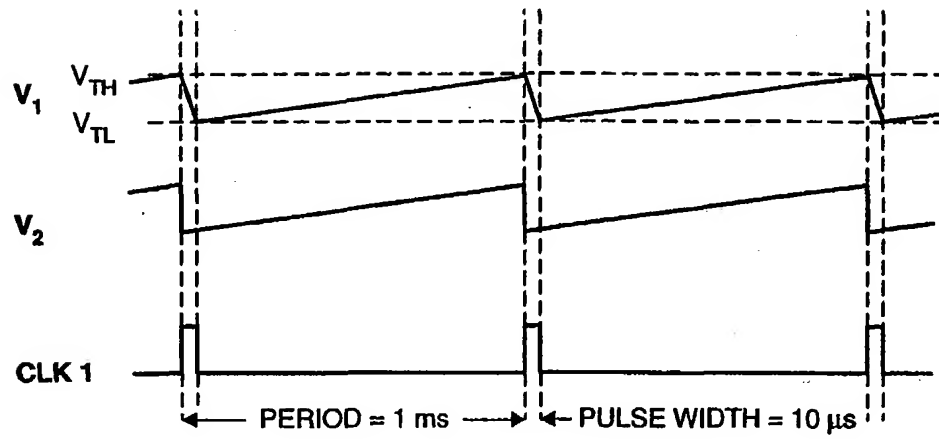


FIG. 15D

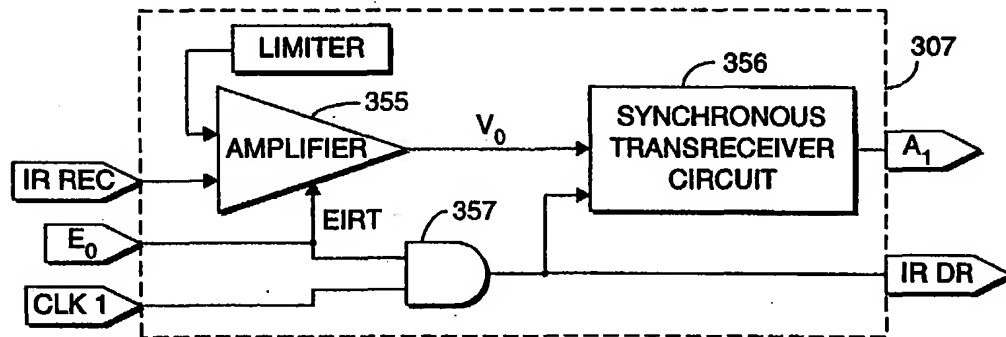


FIG. 15E

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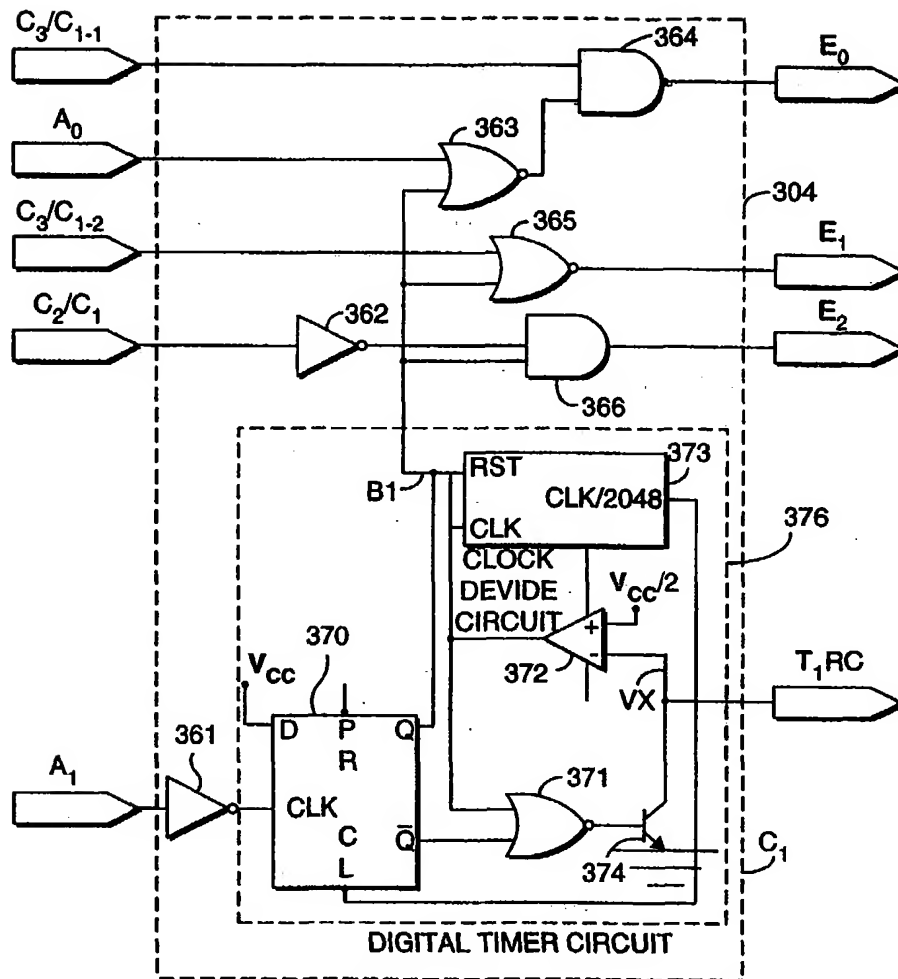


FIG. 15F

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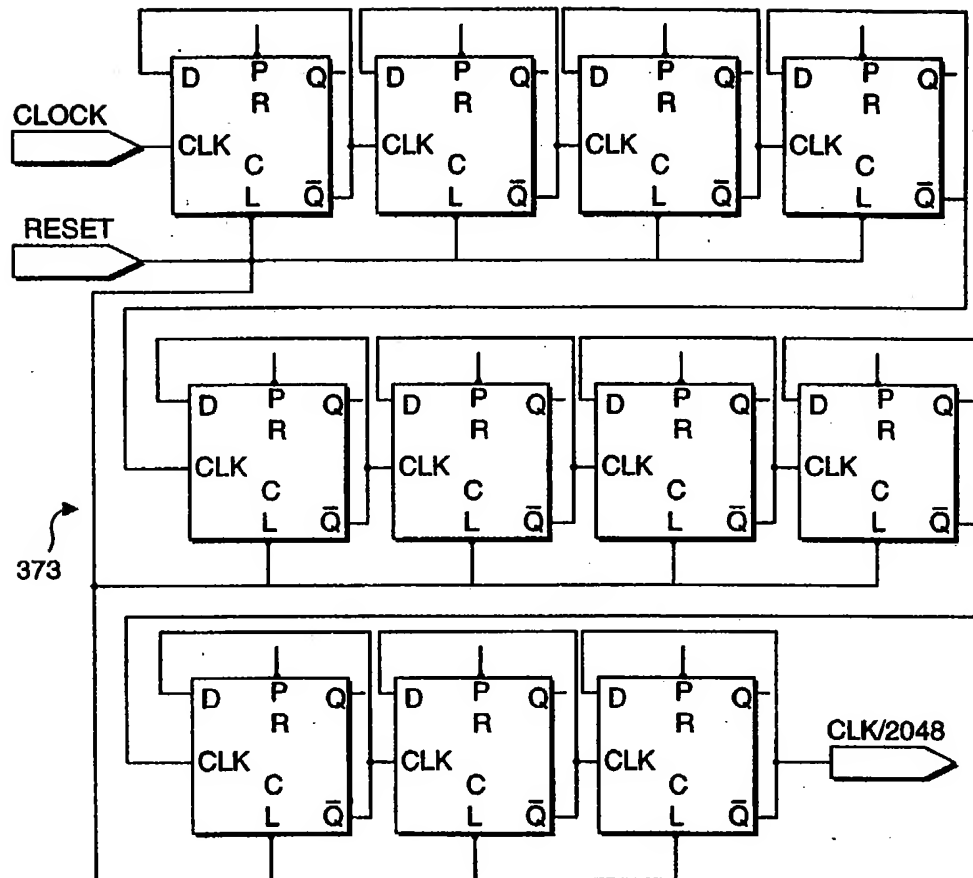


FIG. 15G

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$$\left. \begin{aligned} E_0 &= (B1 + A_0) (C_3 / C_{1-1}) \\ E_1 &= (C_3 / C_{1-2}) + B1 \\ E_2 &= (C_2 / C_1) (T_1) \end{aligned} \right\}$$

FIG. 15H

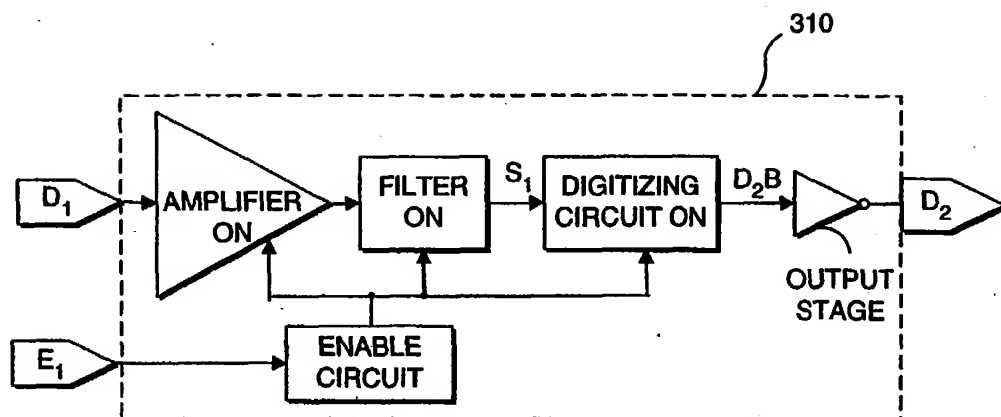


FIG. 15I

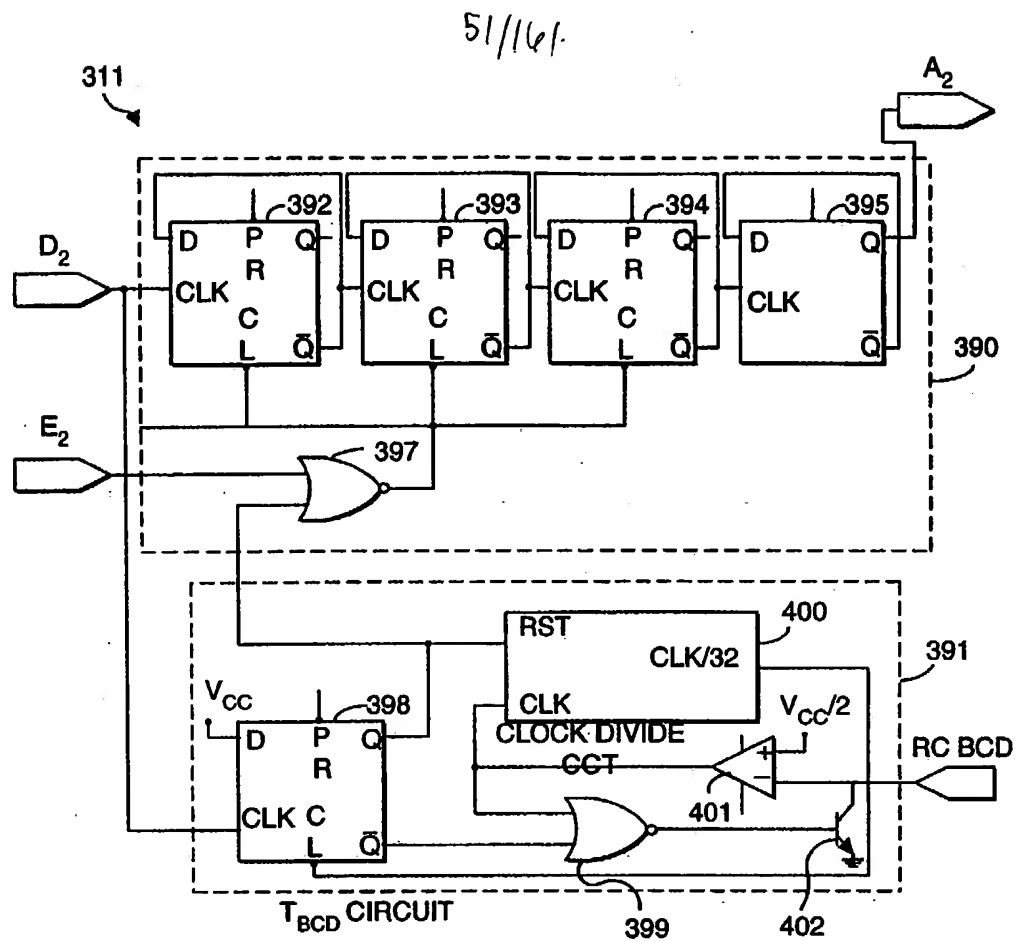


FIG. 15J

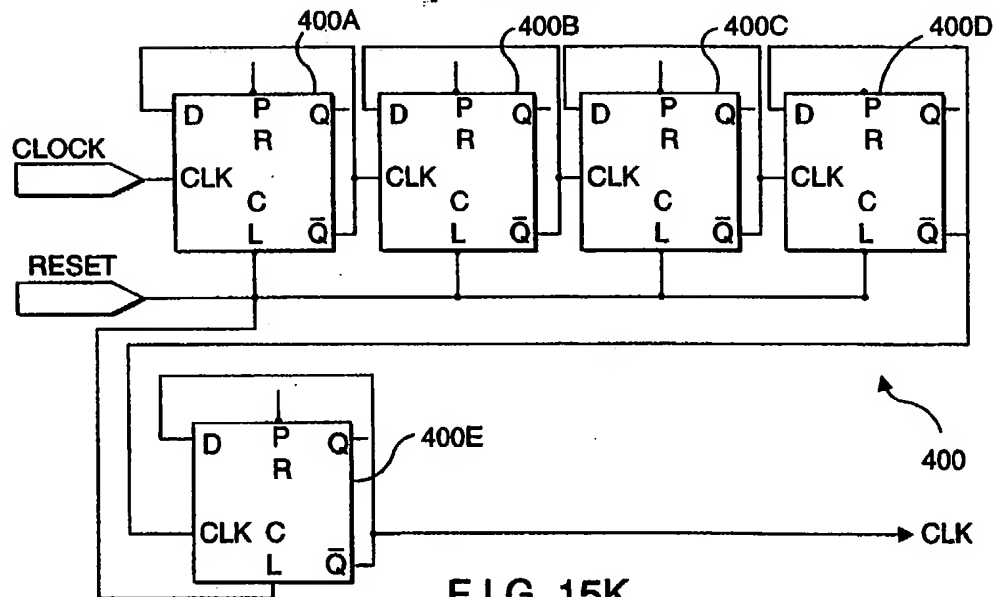


FIG. 15K

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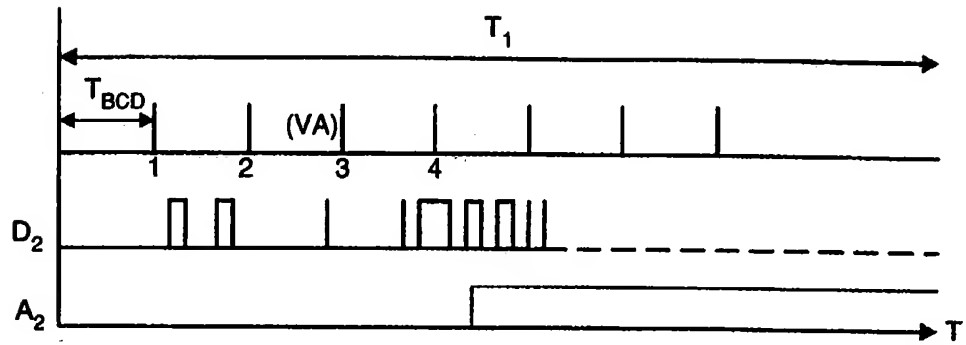


FIG. 15L

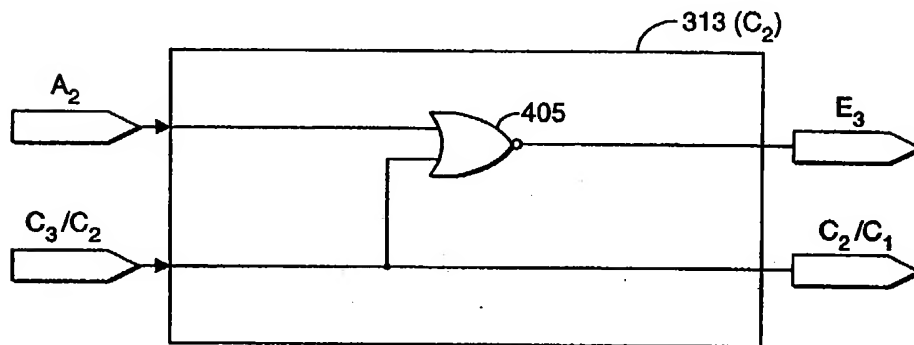


FIG. 15M

$C_3/C_2$	$A_2$	$E_3$	$C_2/C_1$
0	0	0	0
0	1	1	0
1	X	1	1

X: DON'T CARE (I.E.  $C_3/C_2$  OVERRIDES  $A_2$ )

FIG. 15N



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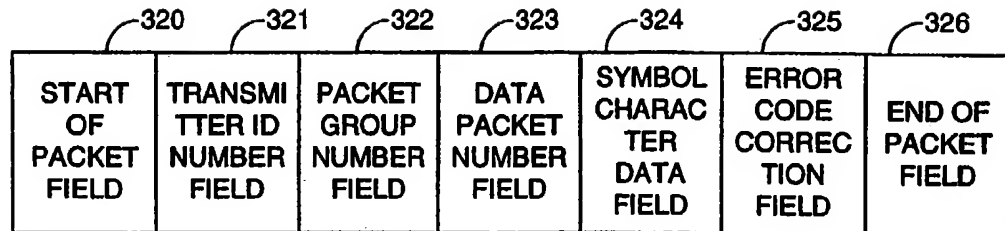


FIG. 150

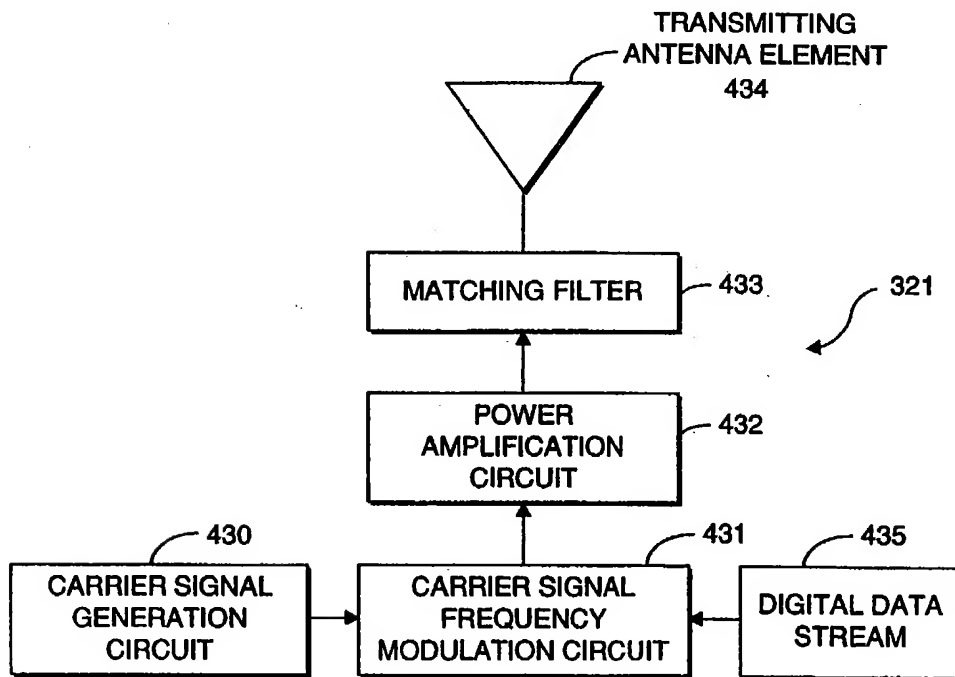


FIG. 16

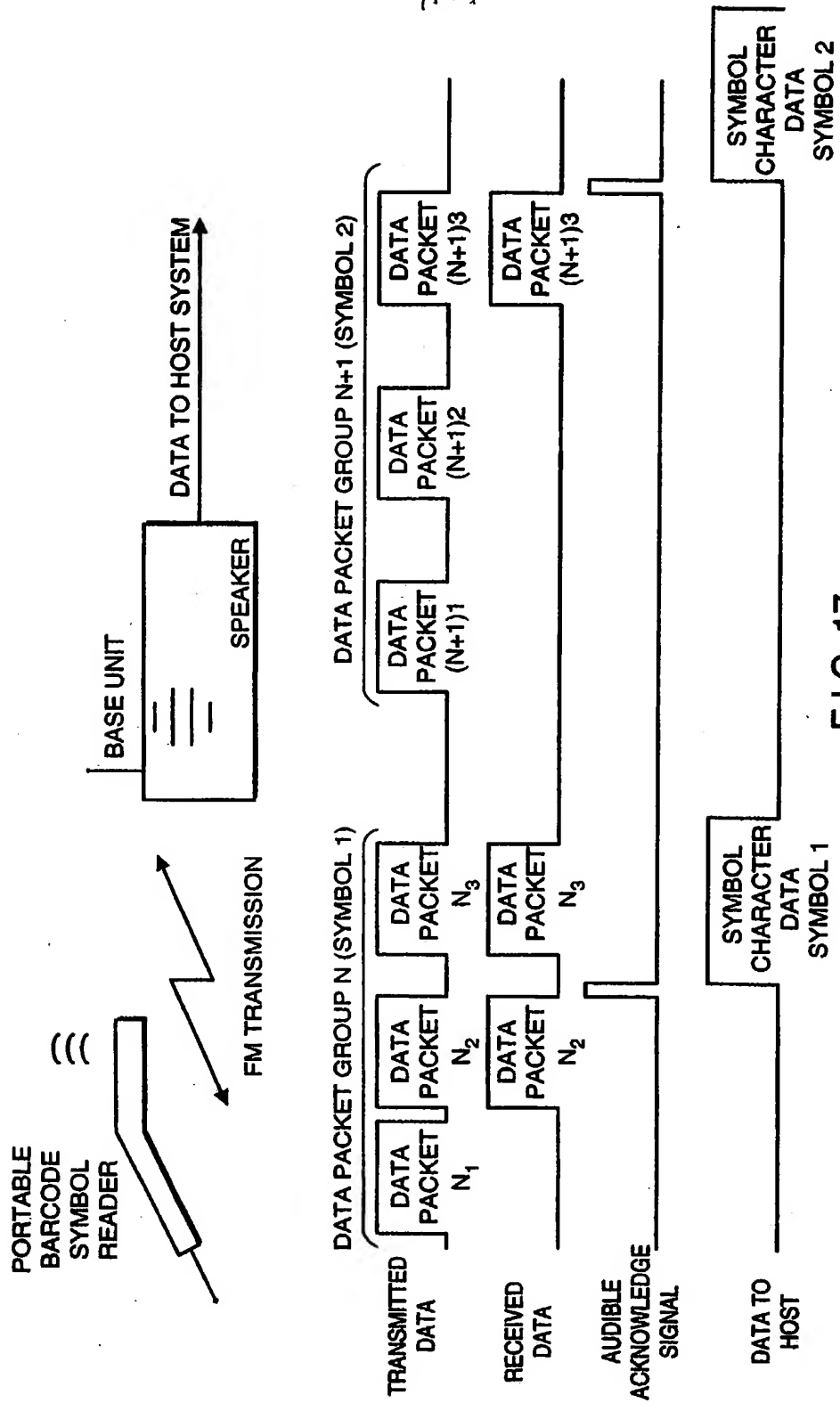


FIG. 17

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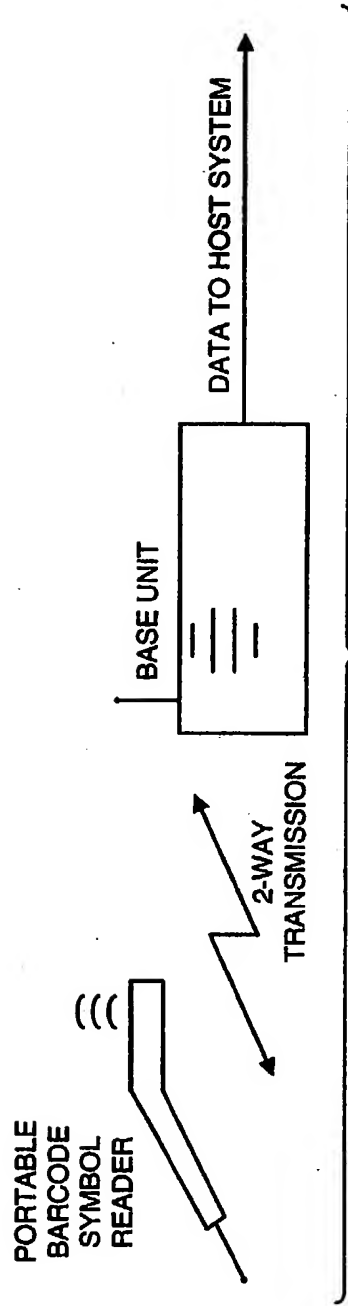


FIG. 18

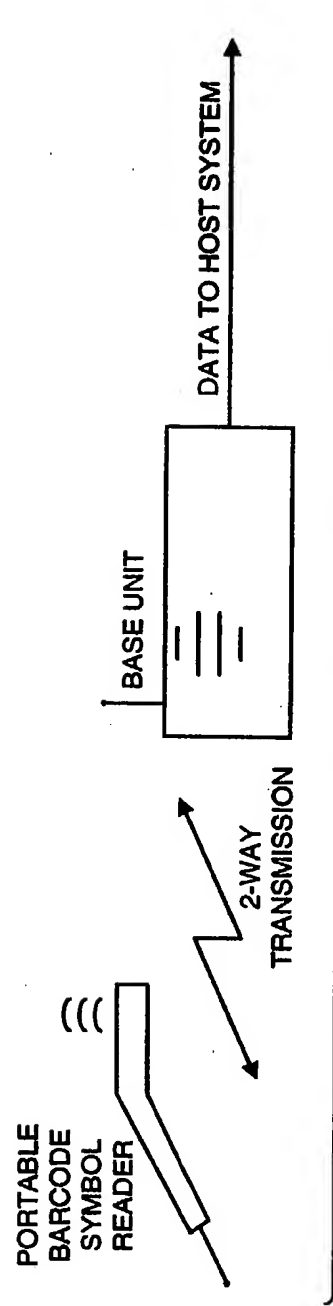


FIG. 19

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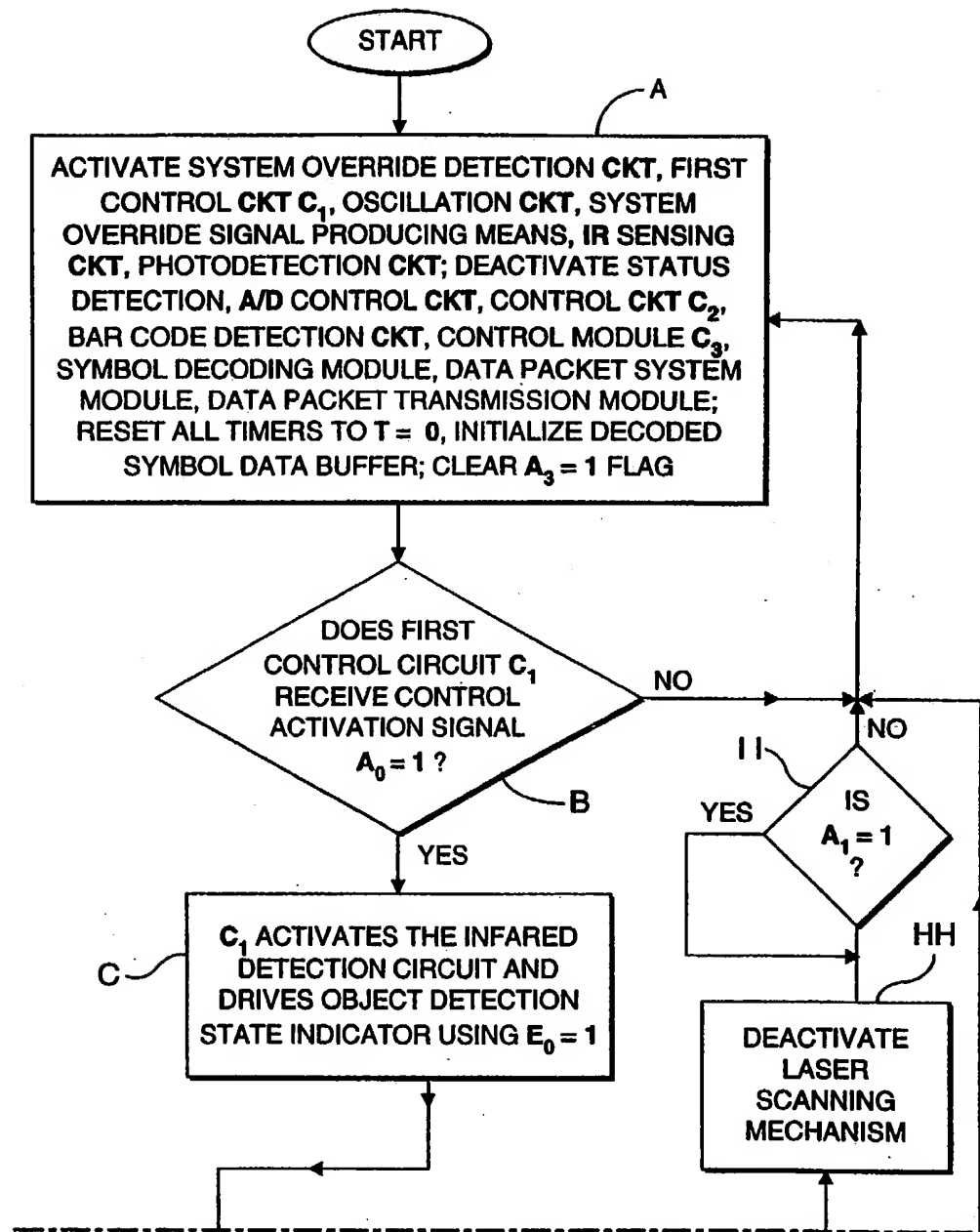


FIG. 20A1

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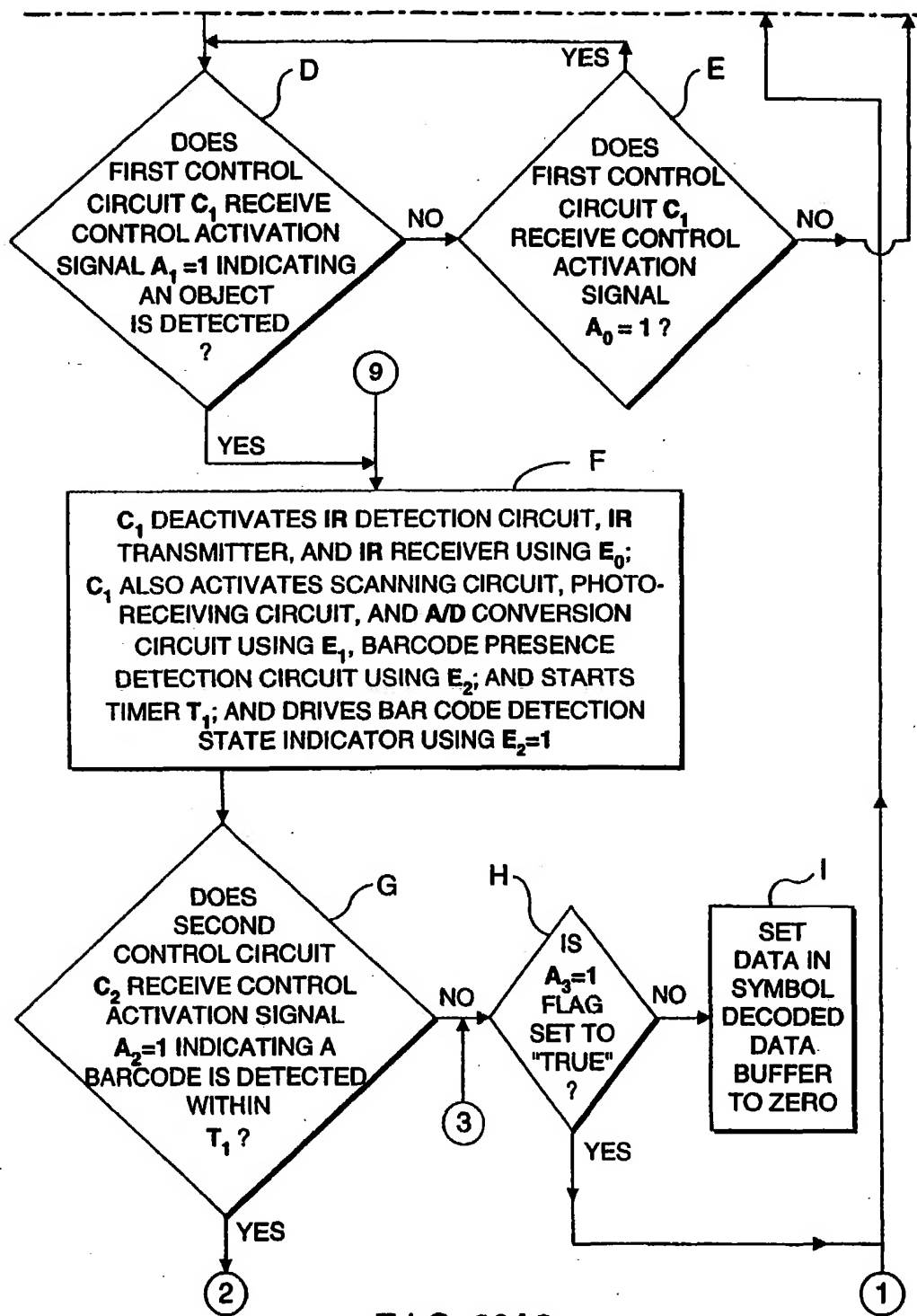
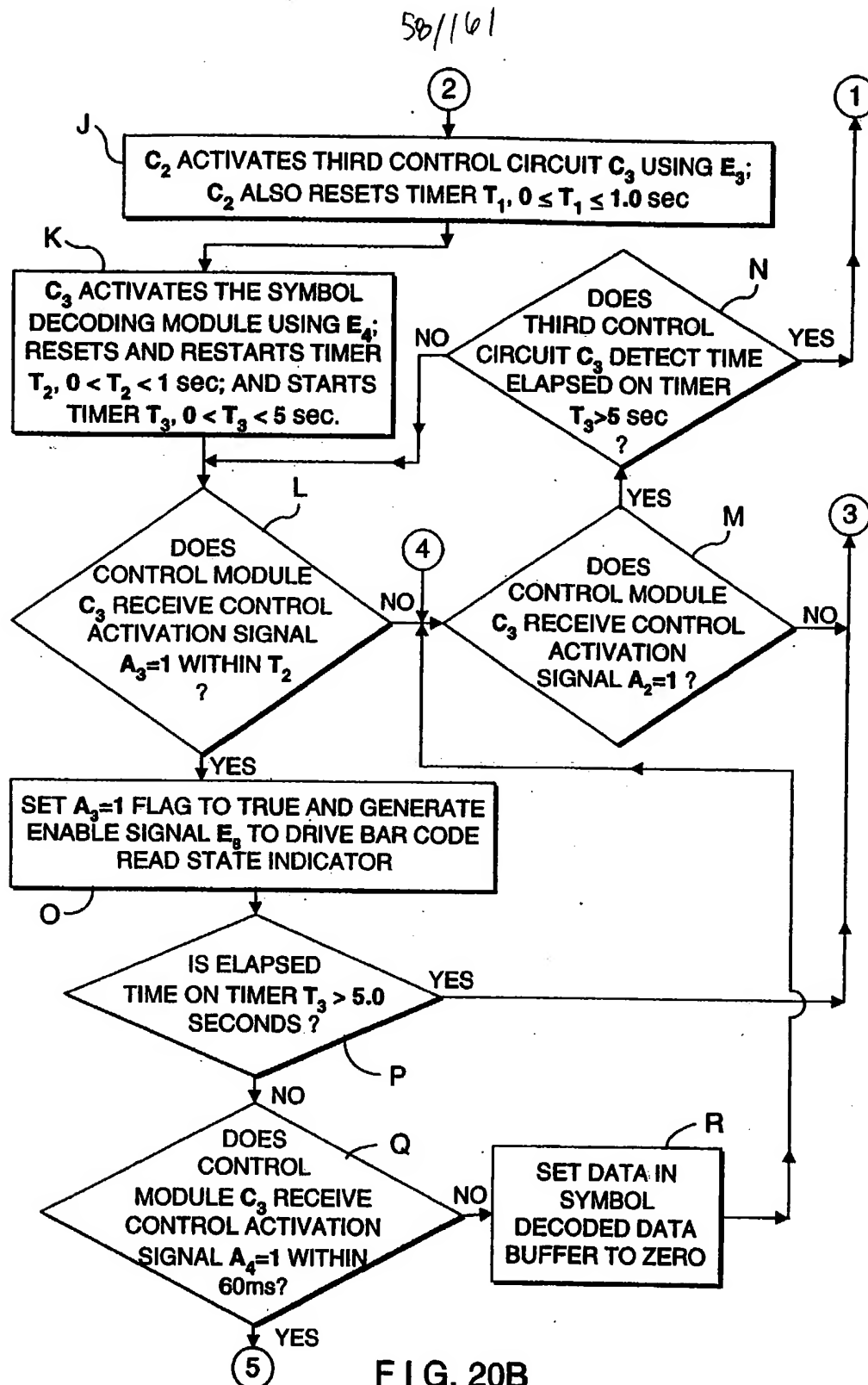


FIG. 20A2



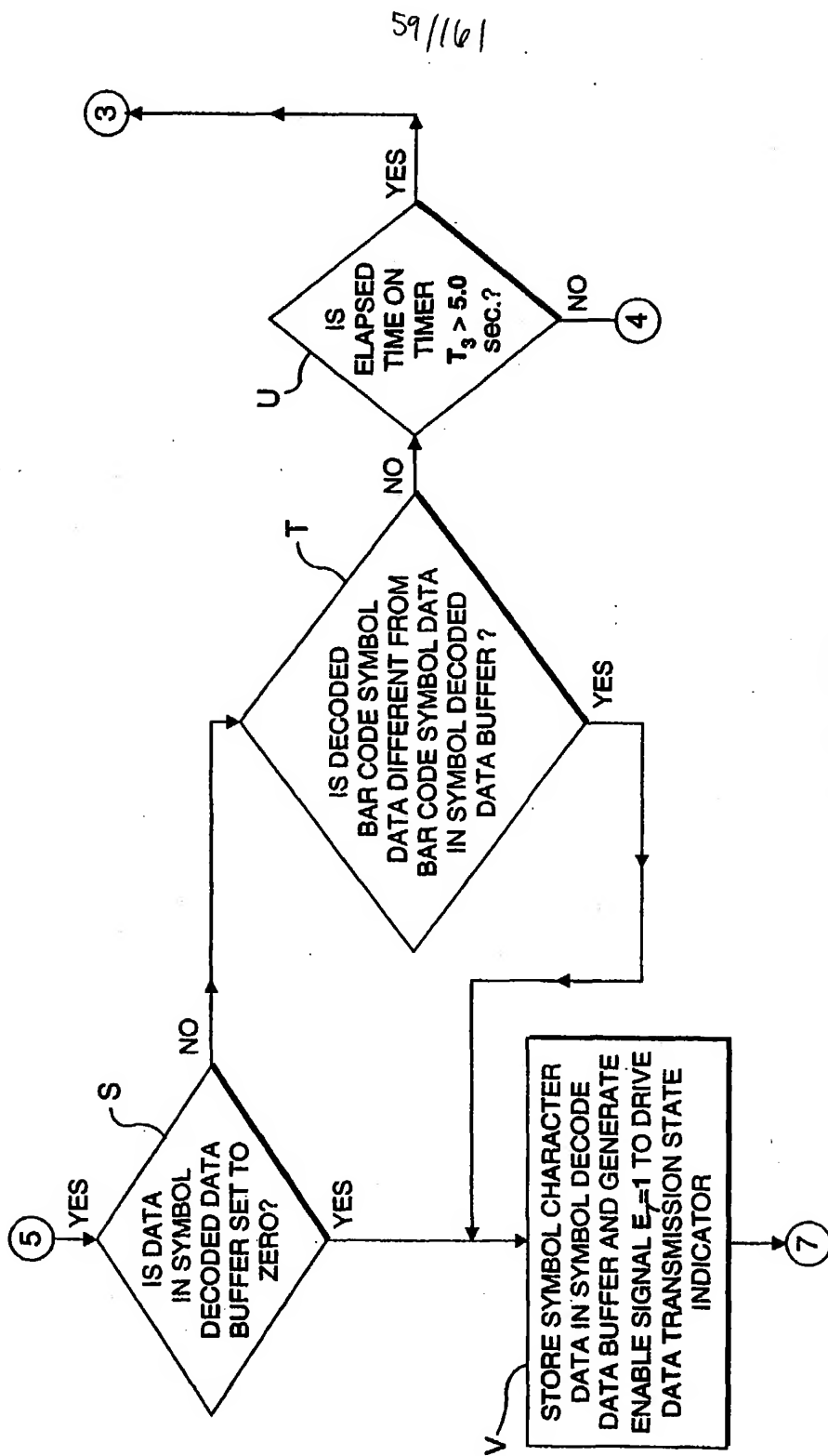


FIG. 20C

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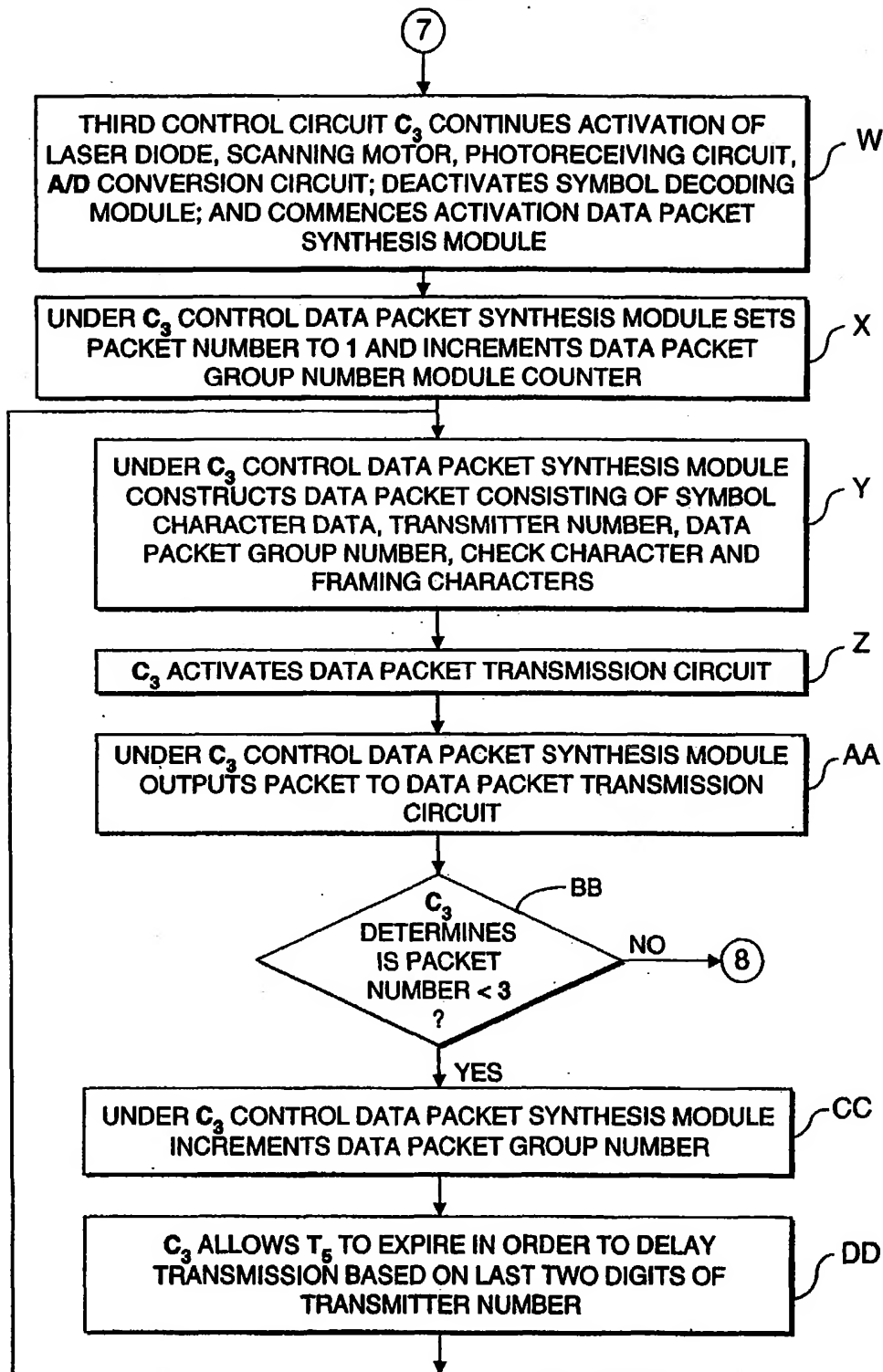


FIG. 20D



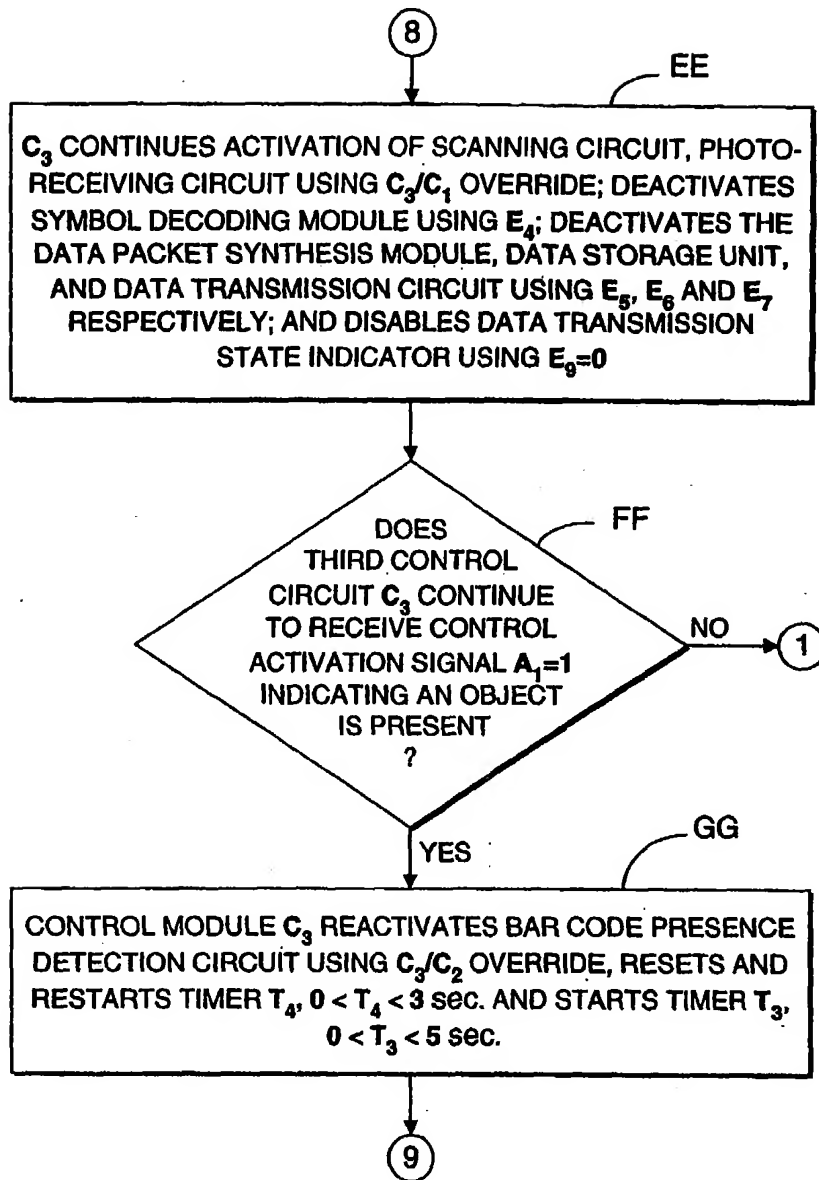


FIG. 20E

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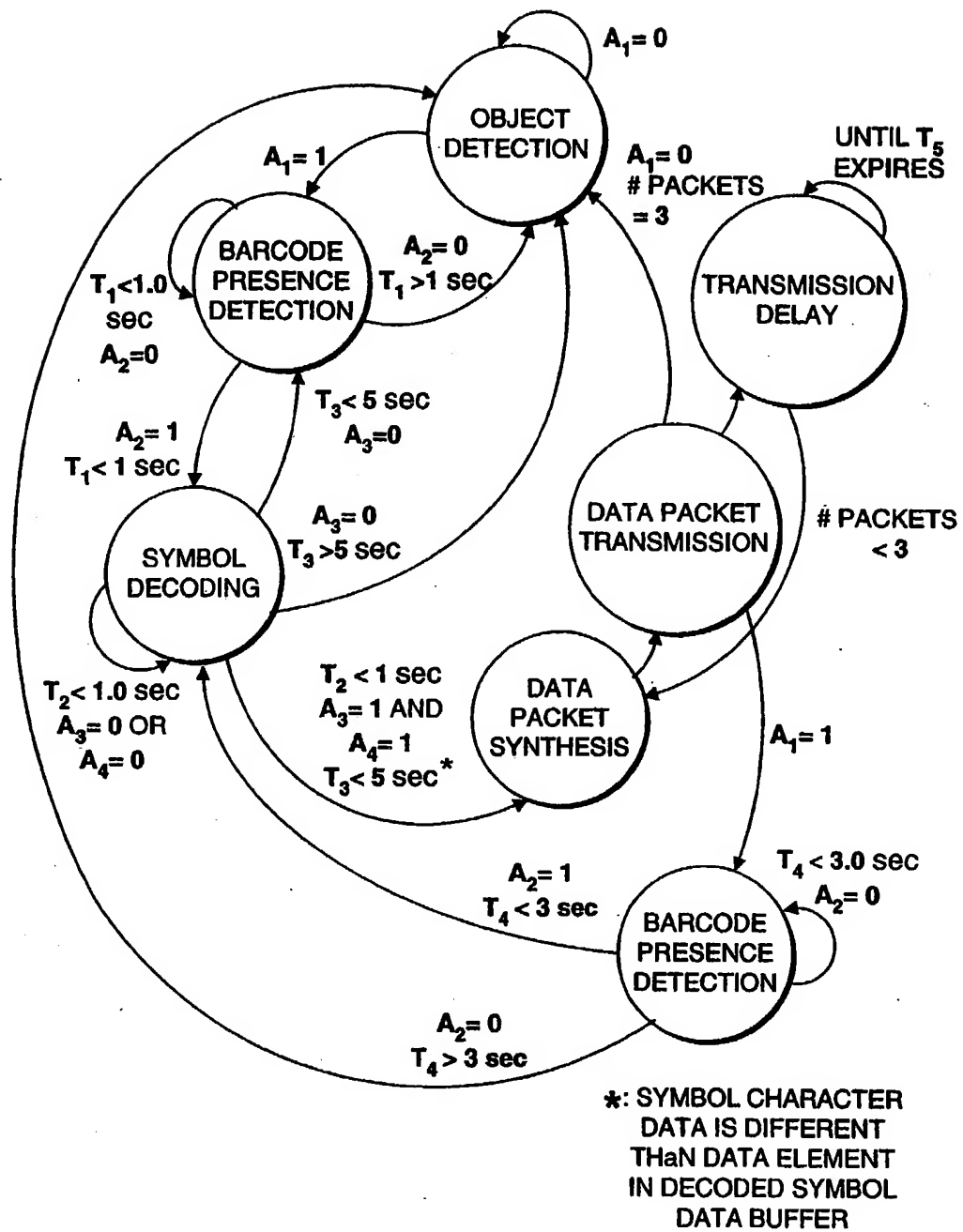


FIG. 21

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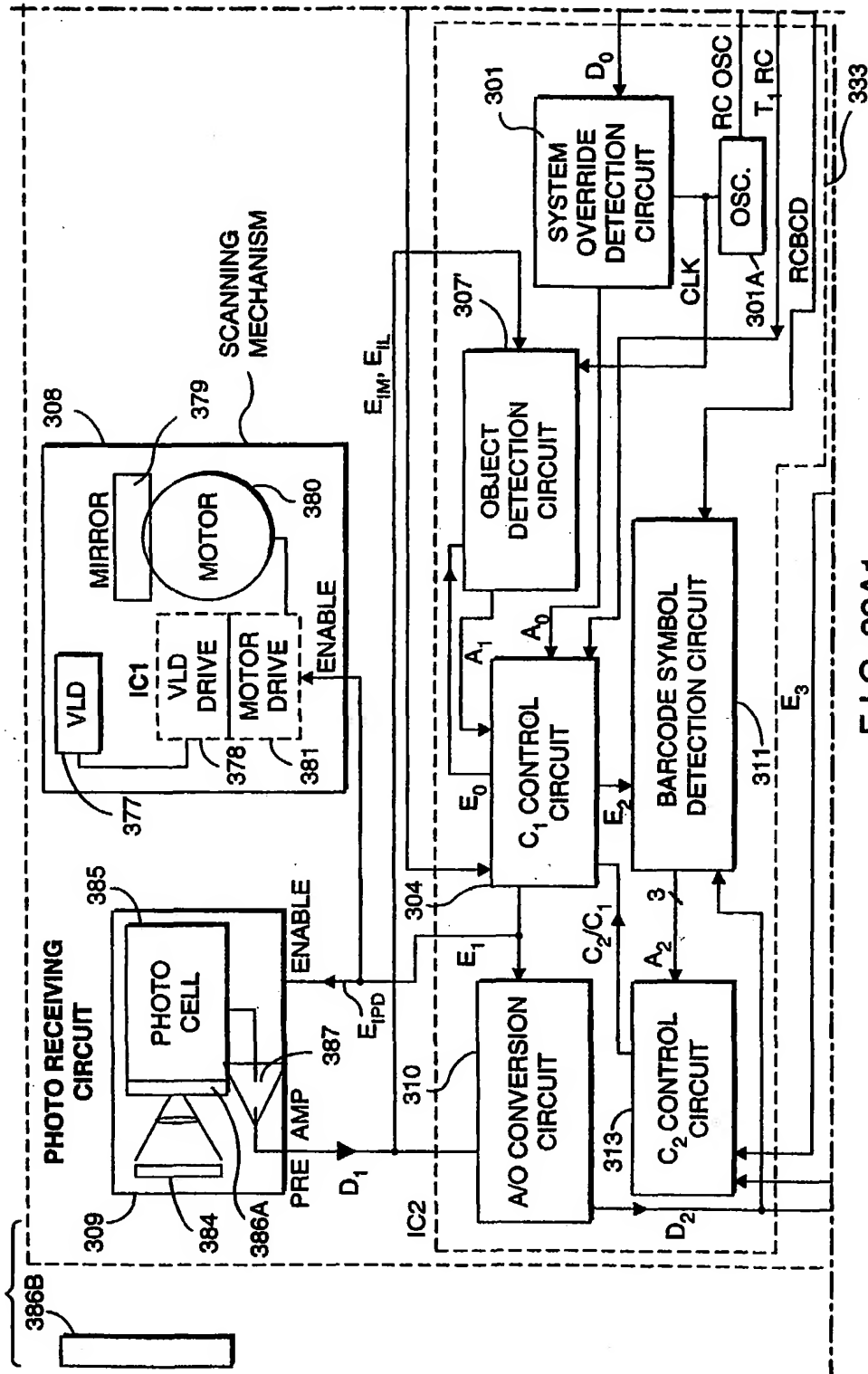


FIG. 22A1

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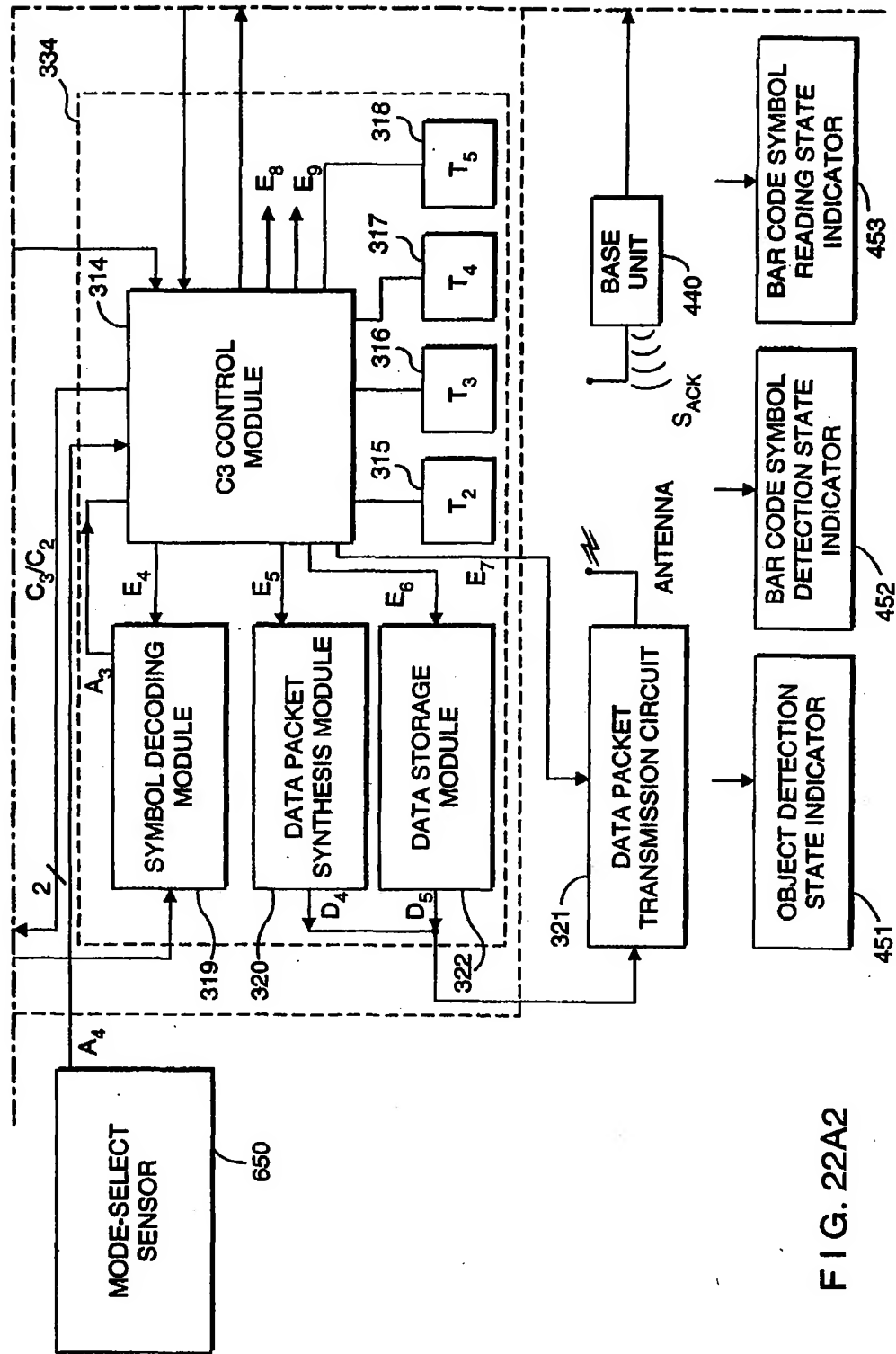


FIG. 22A2

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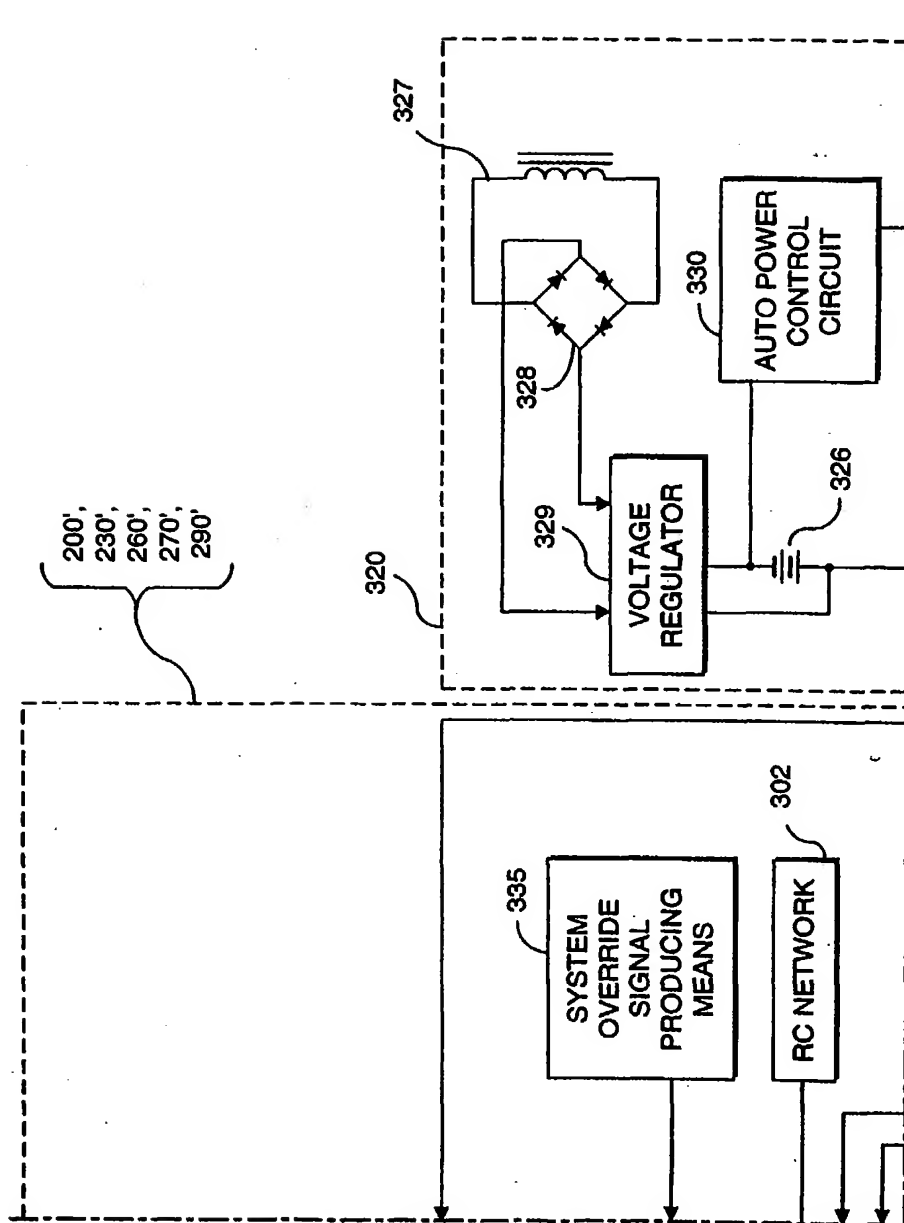


FIG. 22A3

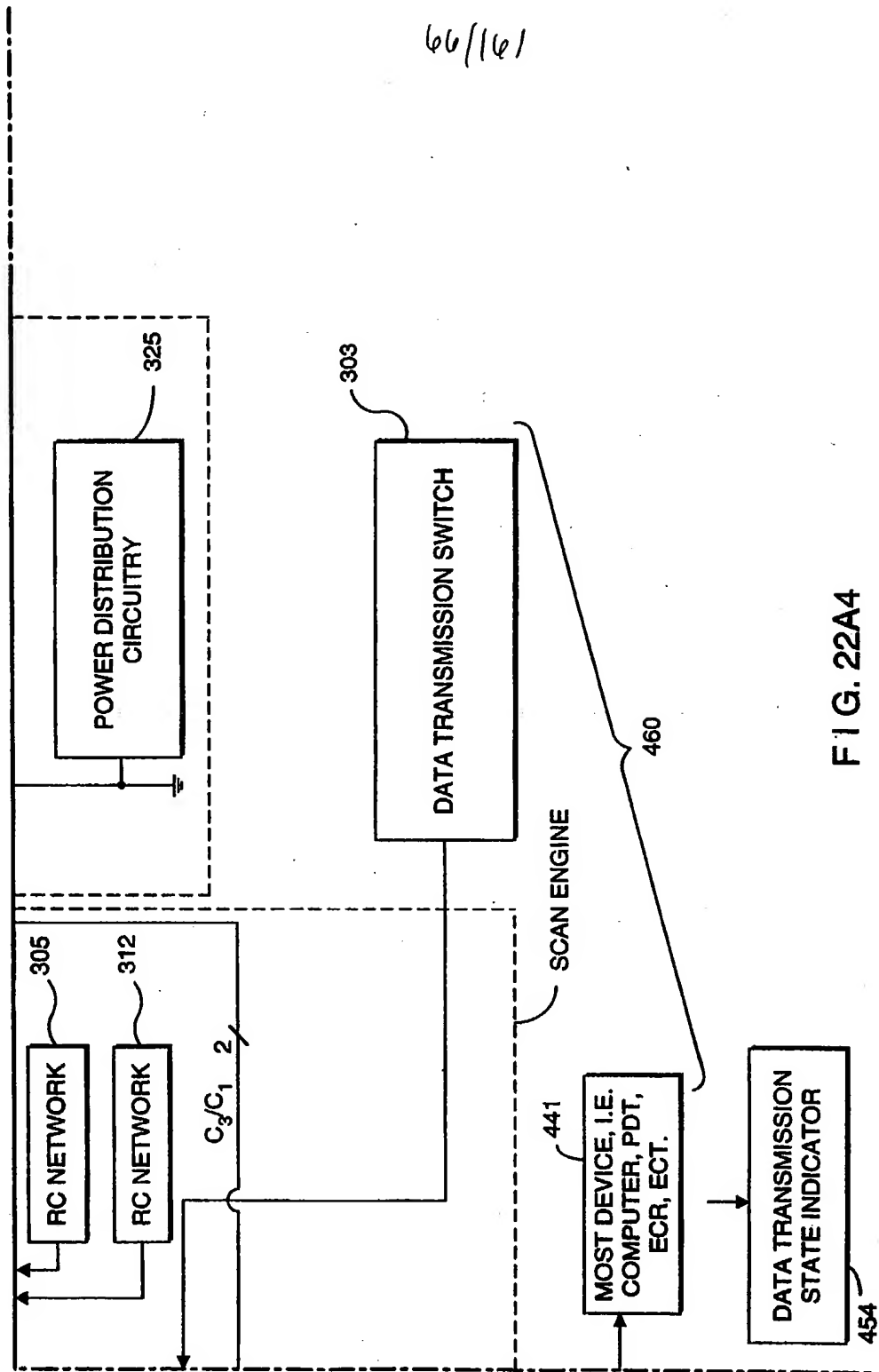


FIG. 22A4

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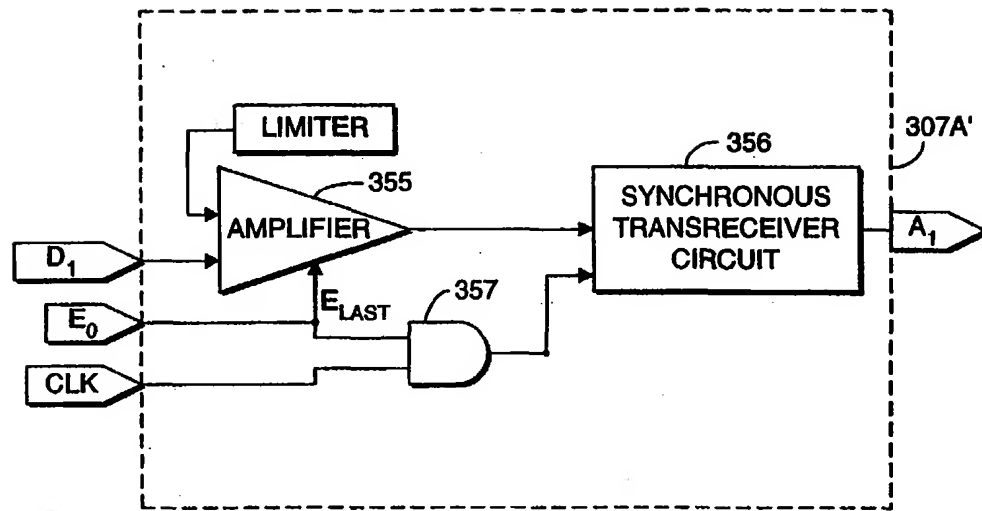


FIG. 22B

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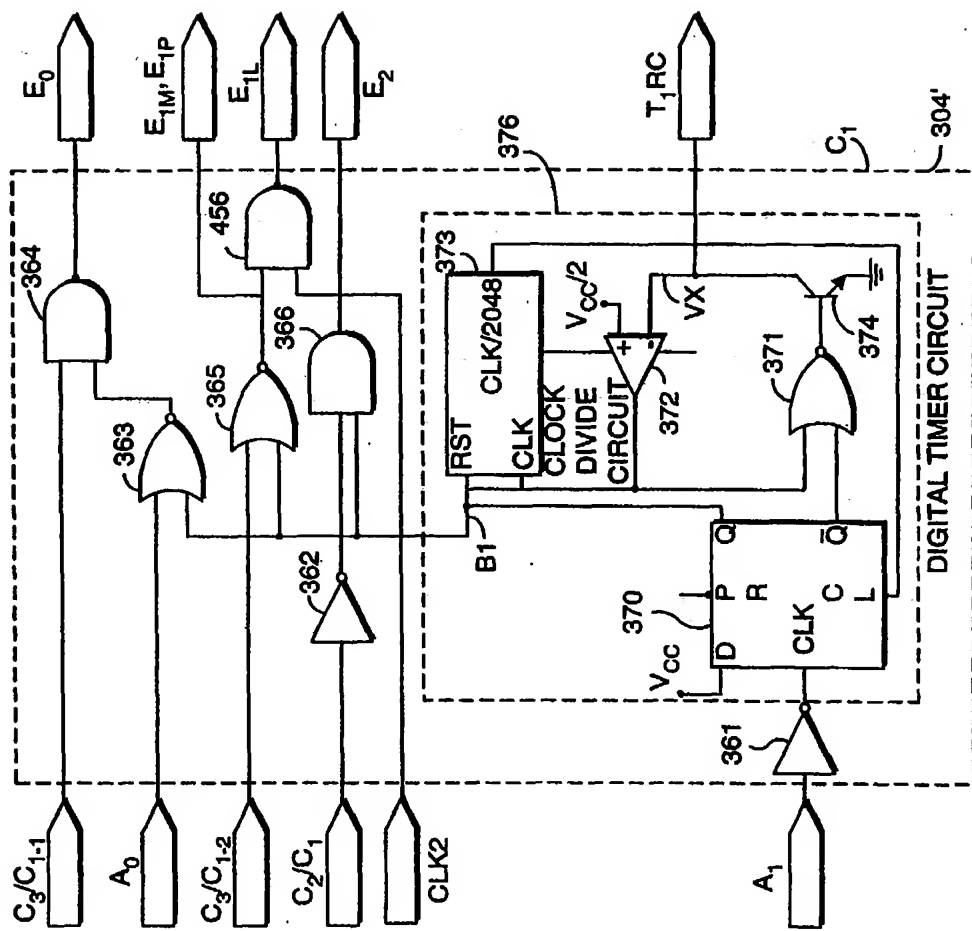


FIG. 22C



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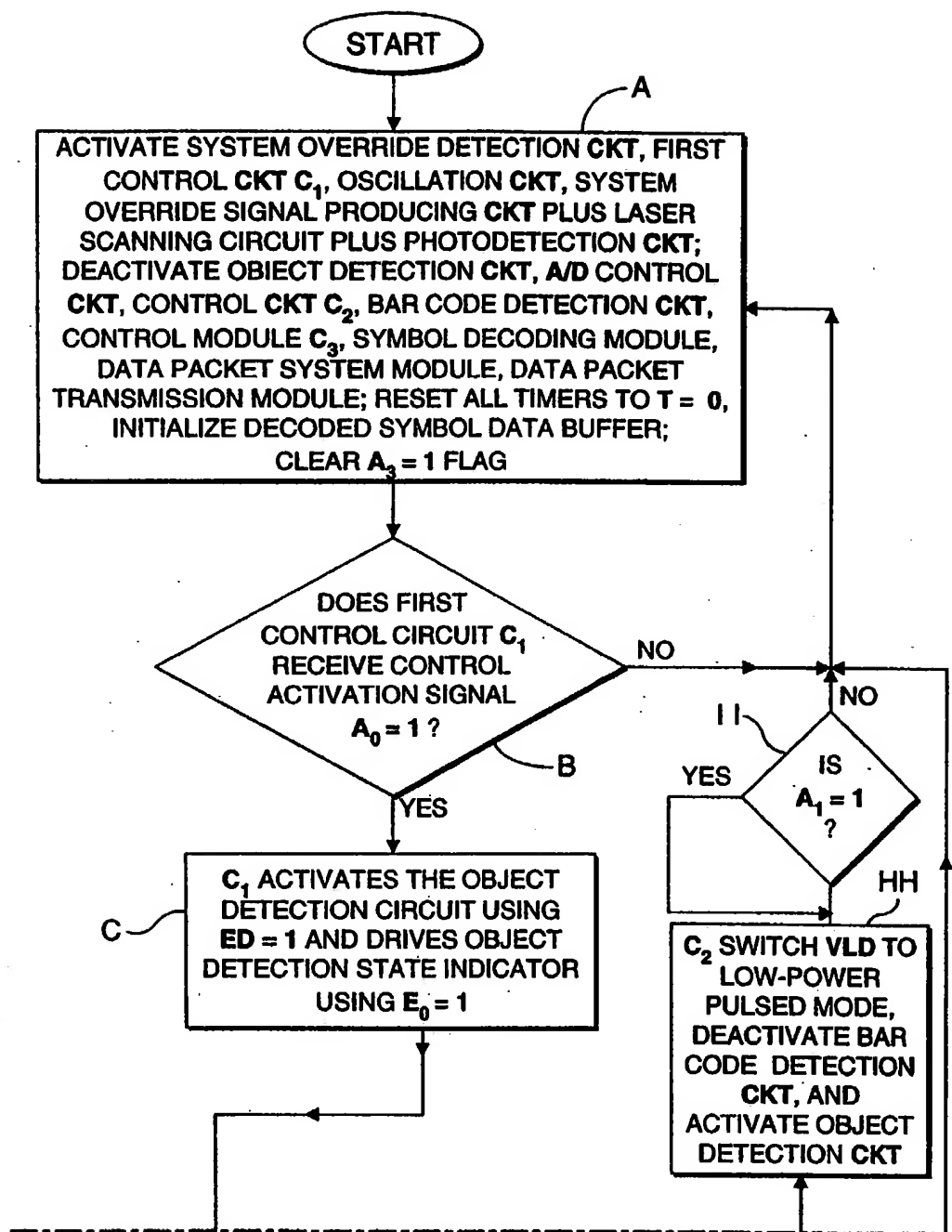


FIG. 23A1

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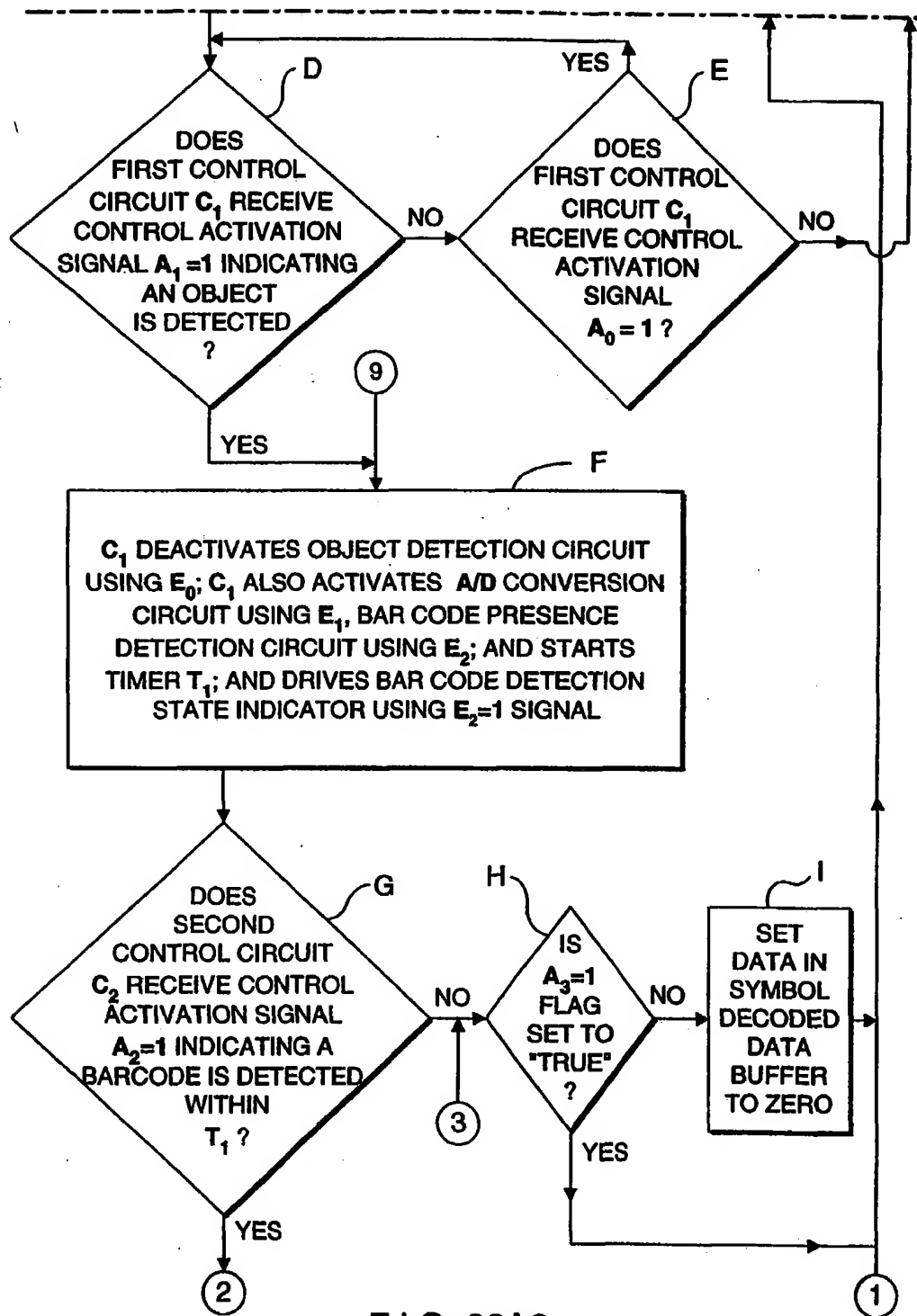
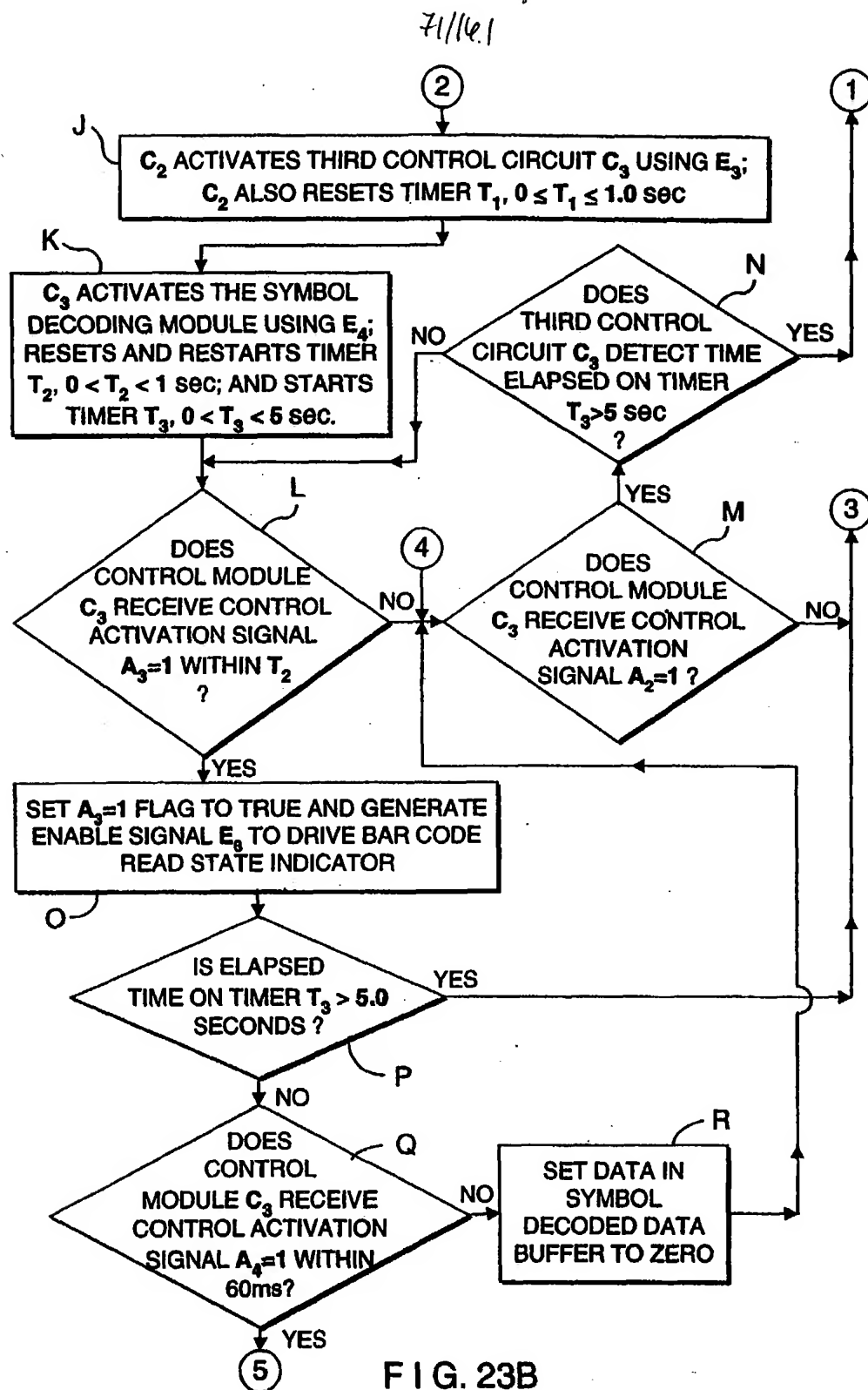


FIG. 23A2



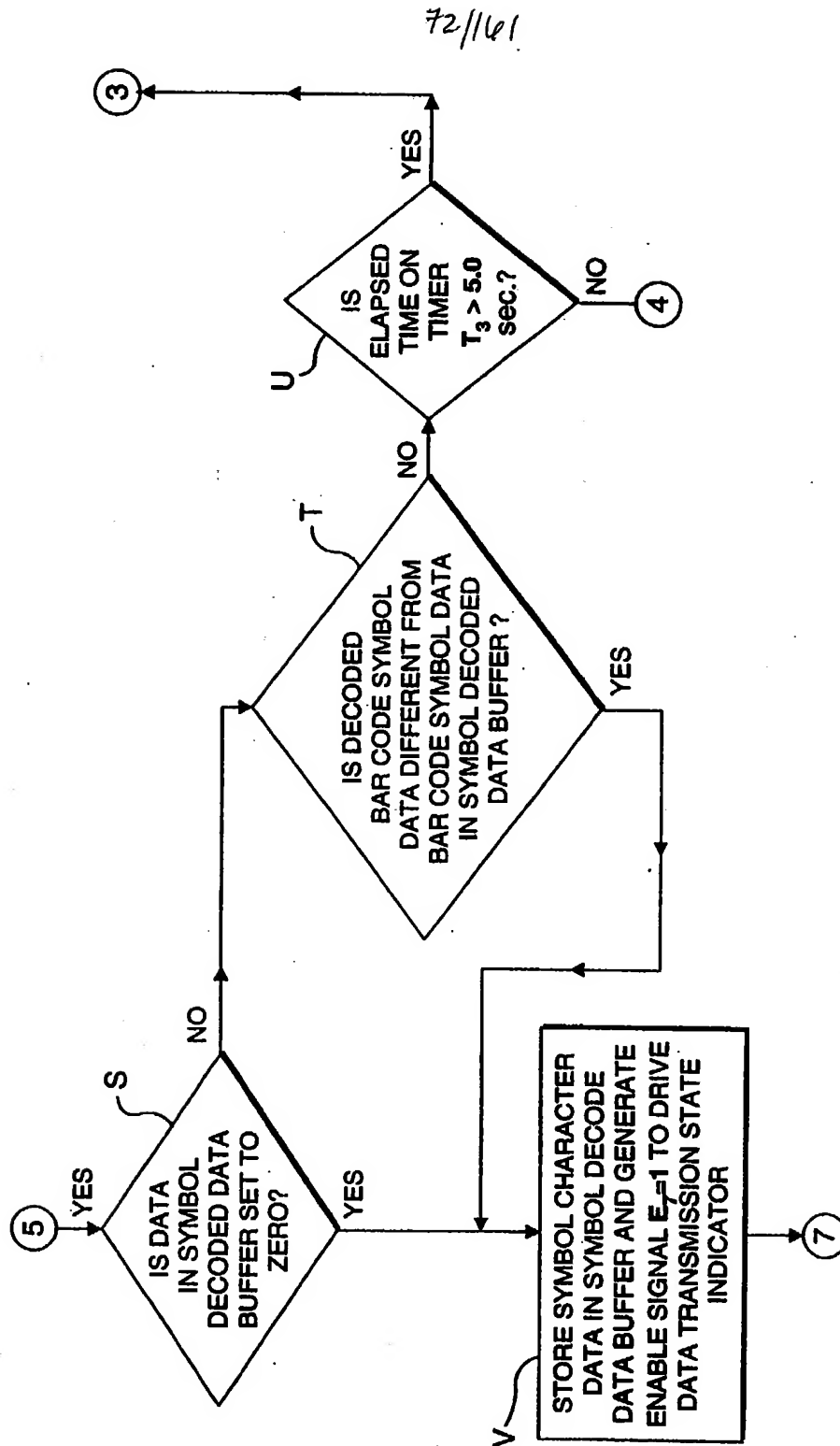


FIG. 23C

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7

THIRD CONTROL CIRCUIT  $C_3$  CONTINUES ACTIVATION OF LASER DIODE, SCANNING MOTOR, PHOTORECEIVING CIRCUIT, A/D CONVERSION CIRCUIT; DEACTIVATES SYMBOL DECODING MODULE; AND COMMENCES ACTIVATION DATA PACKET SYNTHESIS MODULE

W

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE SETS PACKET NUMBER TO 1 AND INCREMENTS DATA PACKET GROUP NUMBER MODULE COUNTER

X

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE CONSTRUCTS DATA PACKET CONSISTING OF SYMBOL CHARACTER DATA, TRANSMITTER NUMBER, DATA PACKET GROUP NUMBER, CHECK CHARACTER AND FRAMING CHARACTERS

Y

$C_3$  ACTIVATES DATA PACKET TRANSMISSION CIRCUIT

Z

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE OUTPUTS PACKET TO DATA PACKET TRANSMISSION CIRCUIT

AA

$C_3$  DETERMINES IS PACKET NUMBER  $< 3$  ?

BB

NO → 8

YES

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE INCREMENTS DATA PACKET GROUP NUMBER

CC

$C_3$  ALLOWS  $T_5$  TO EXPIRE IN ORDER TO DELAY TRANSMISSION BASED ON LAST TWO DIGITS OF TRANSMITTER NUMBER

DD

FIG. 23D

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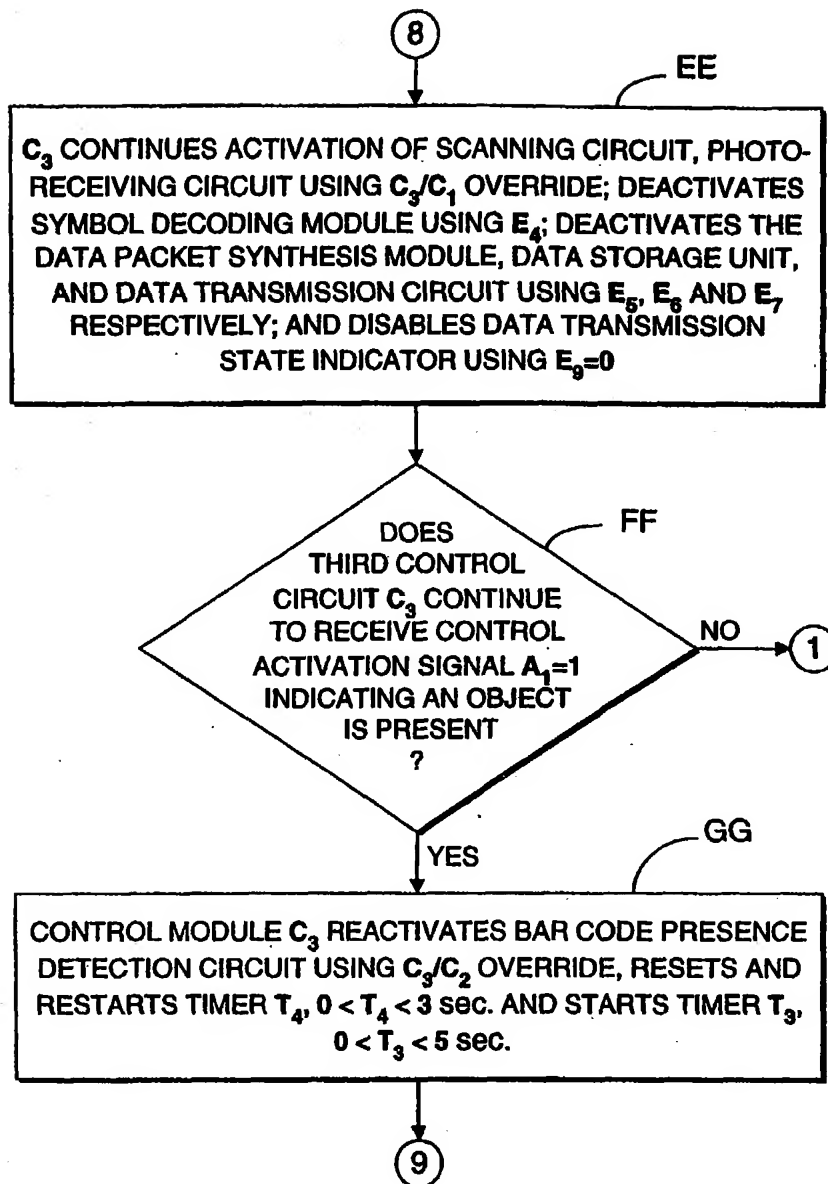


FIG. 23E

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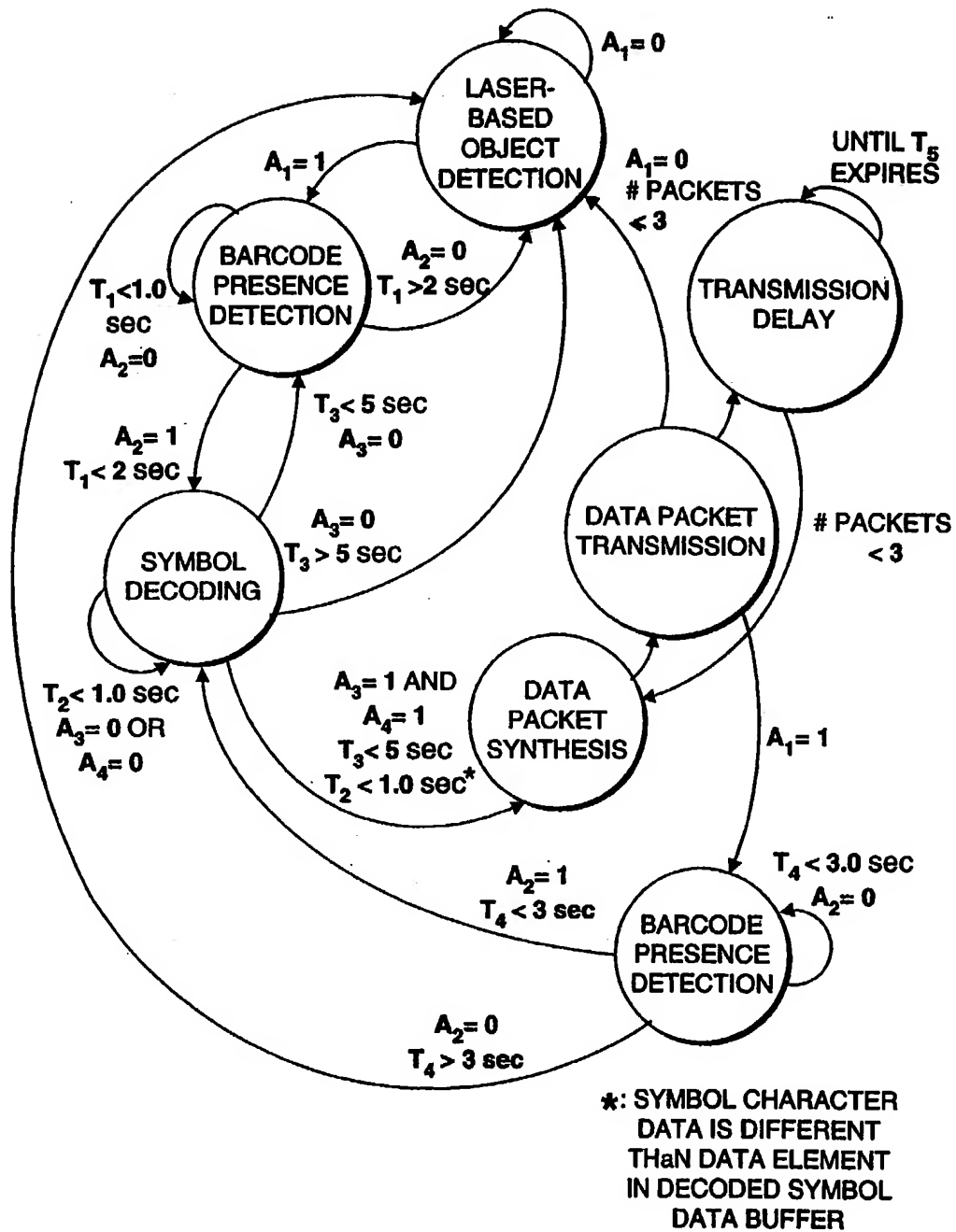
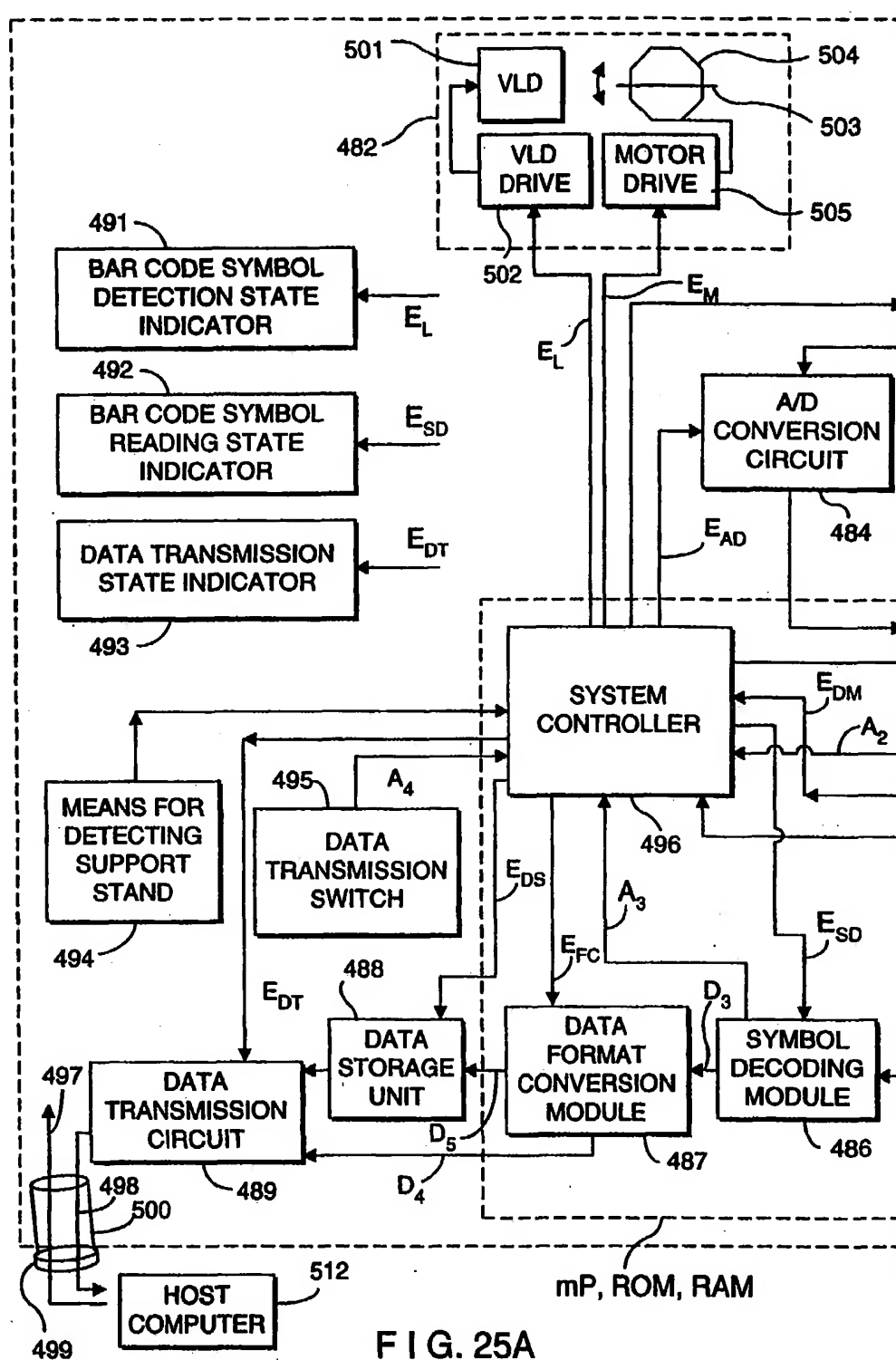


FIG. 24

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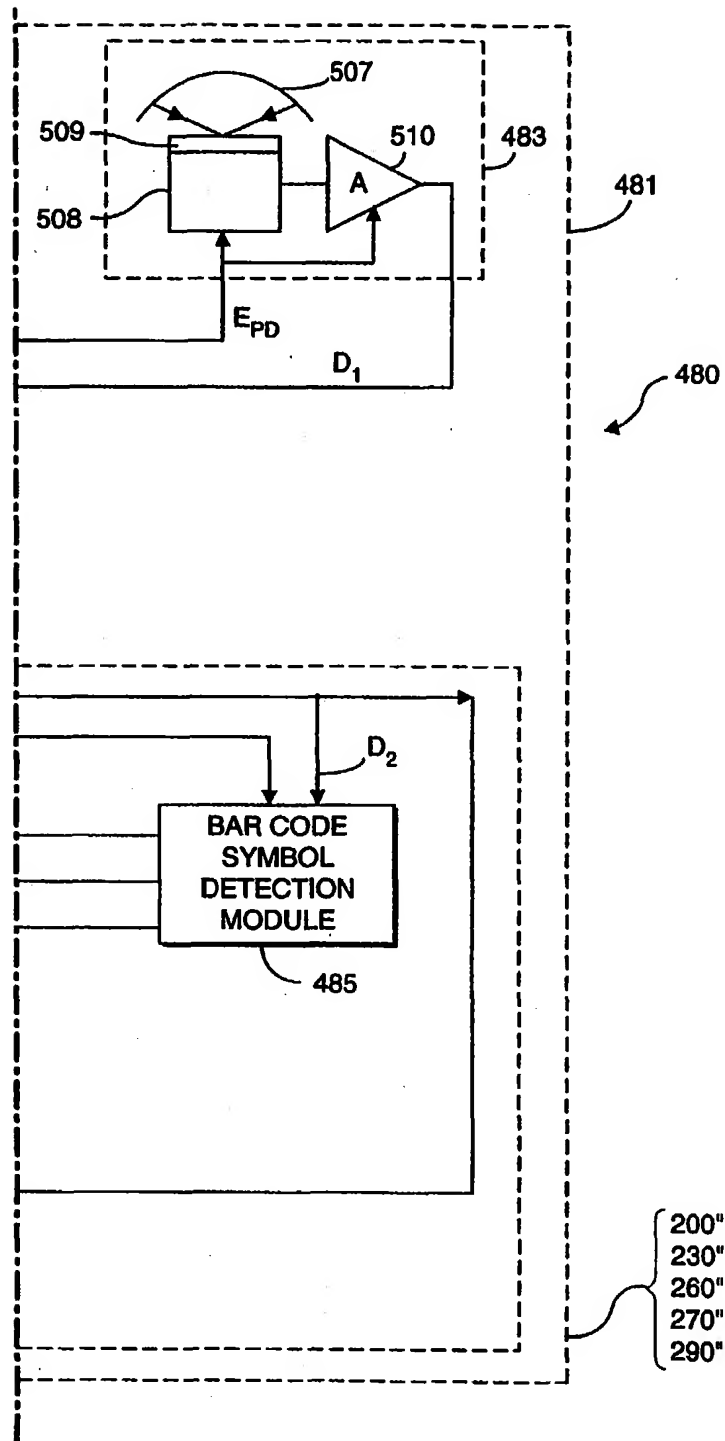


FIG. 25B

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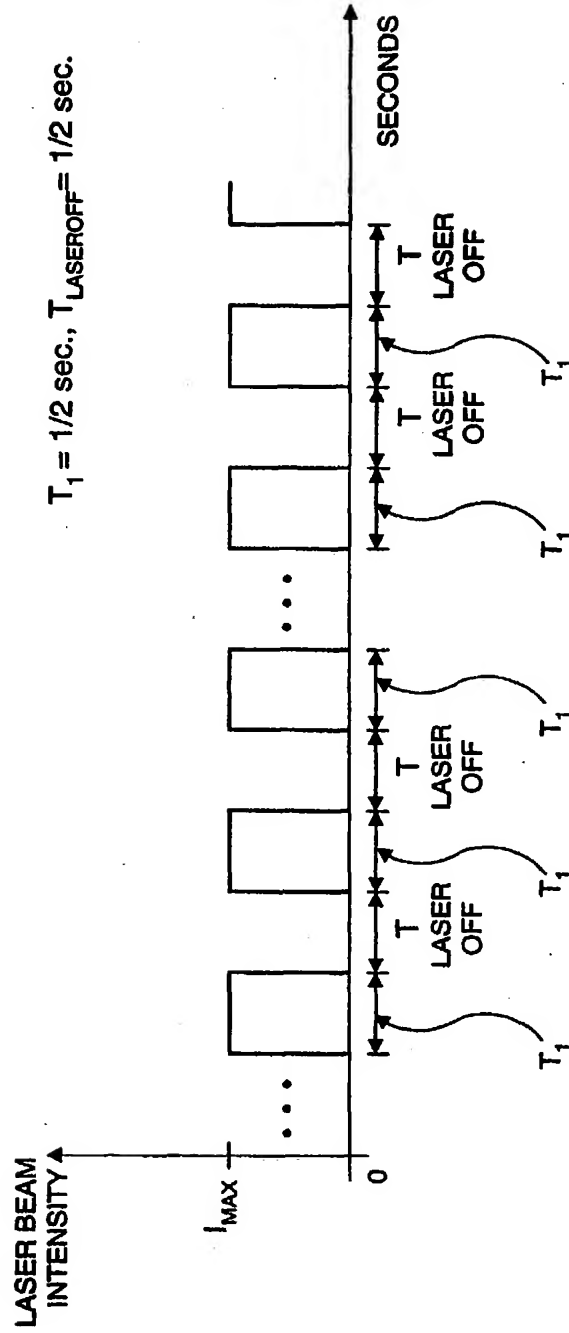


FIG. 26

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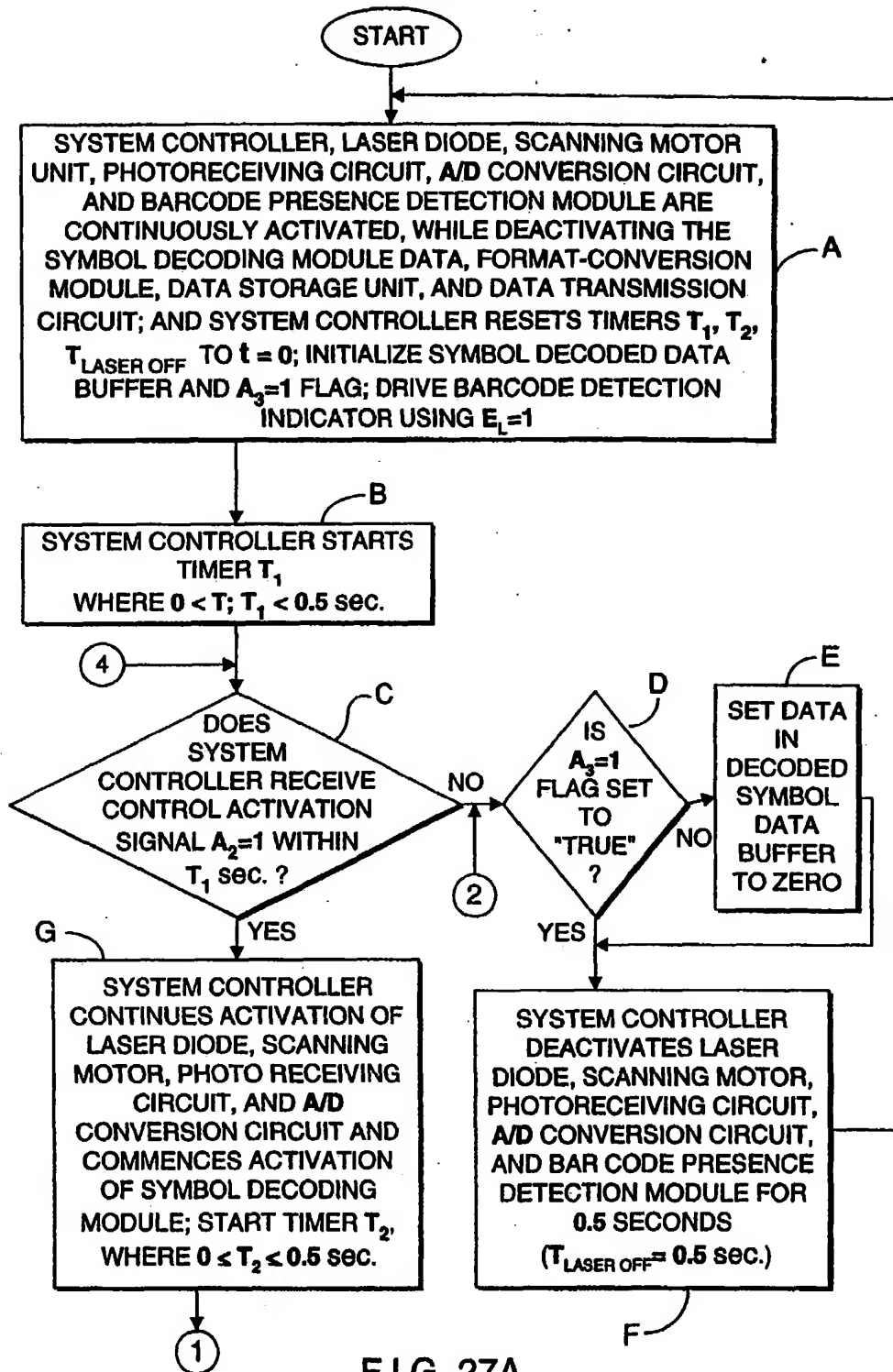


FIG. 27A

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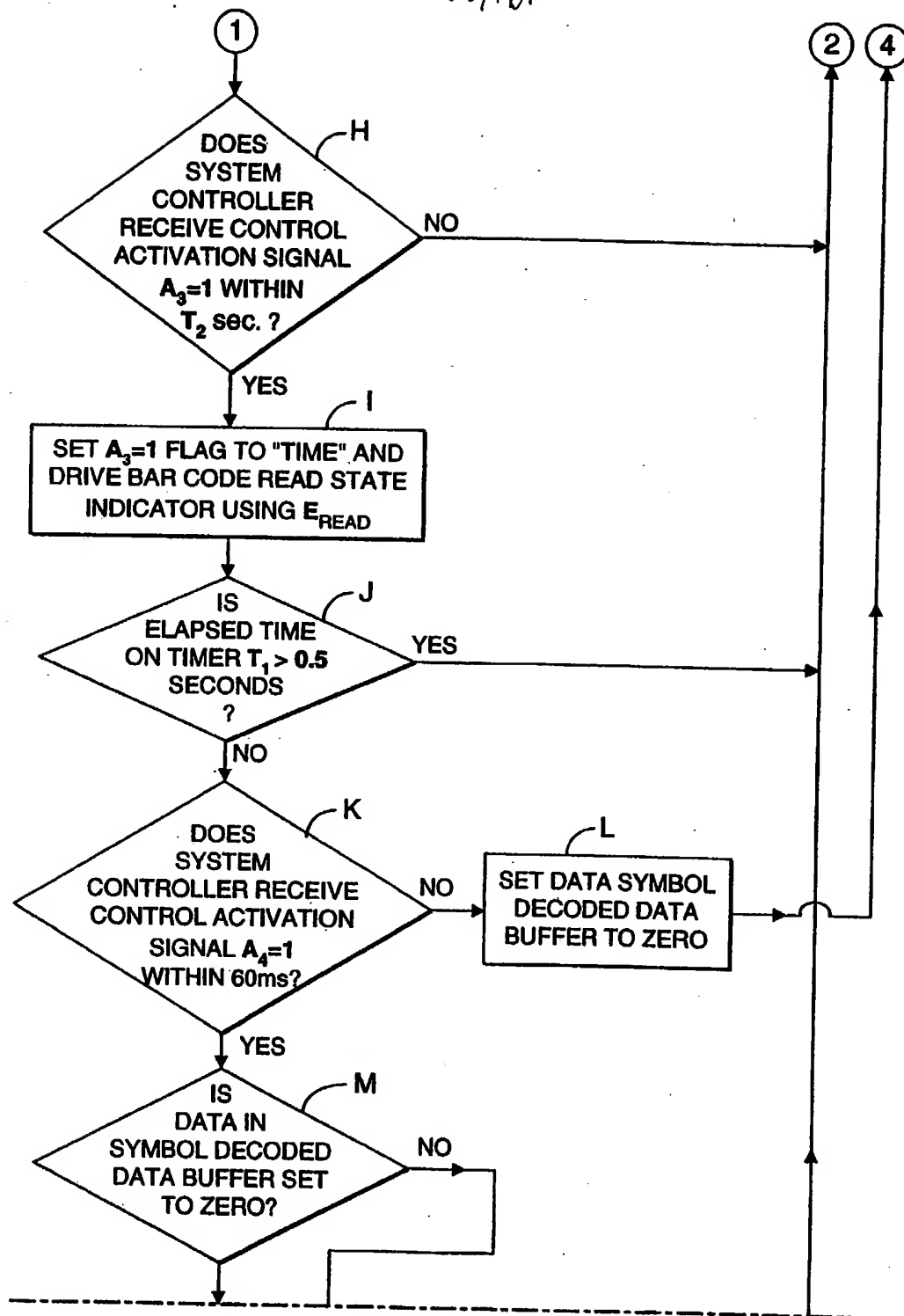


FIG. 27B1

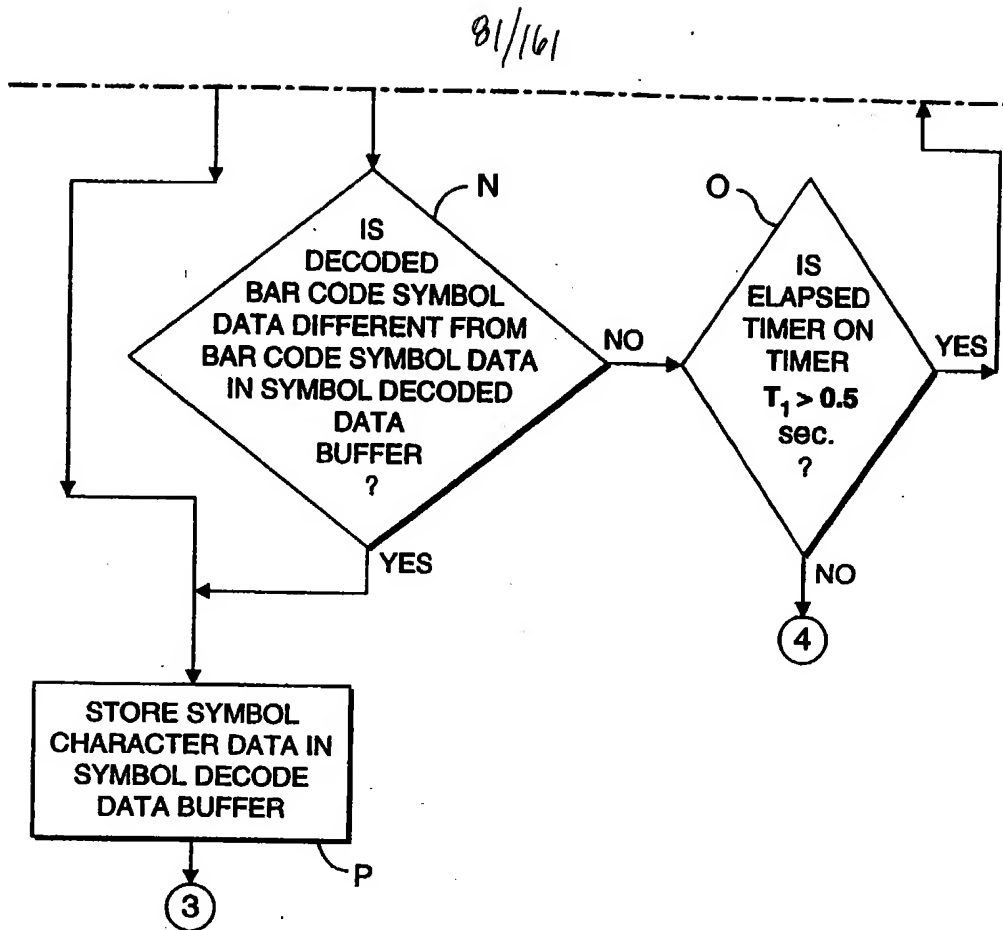


FIG. 27B2

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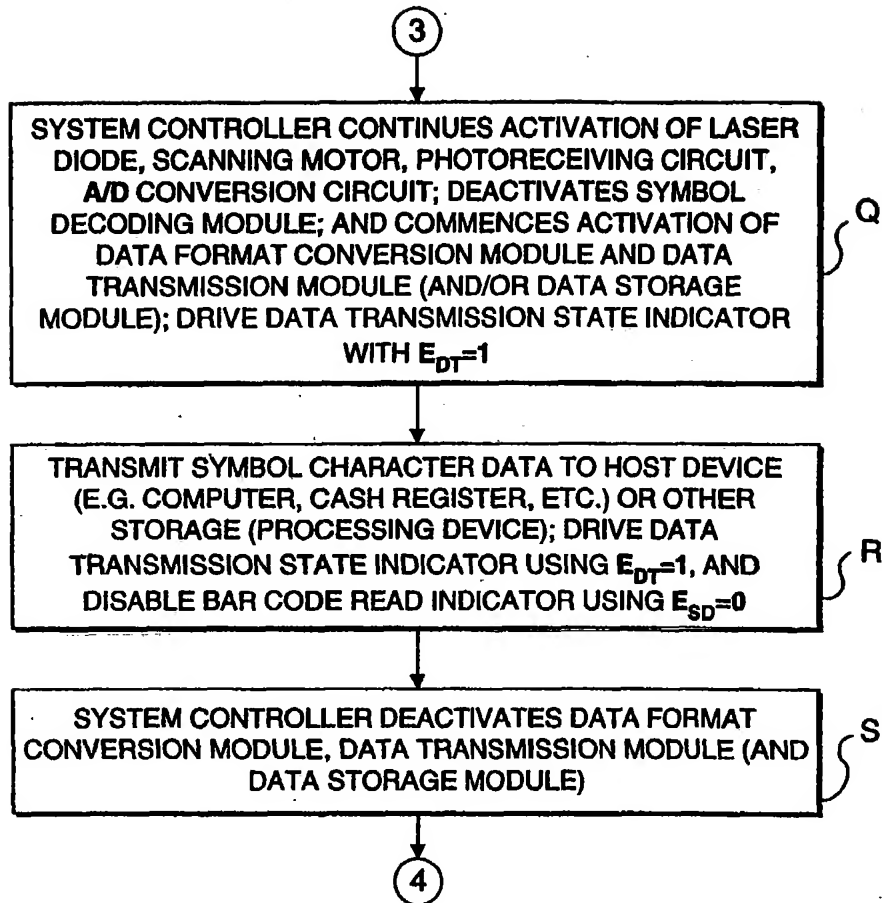


FIG. 27C

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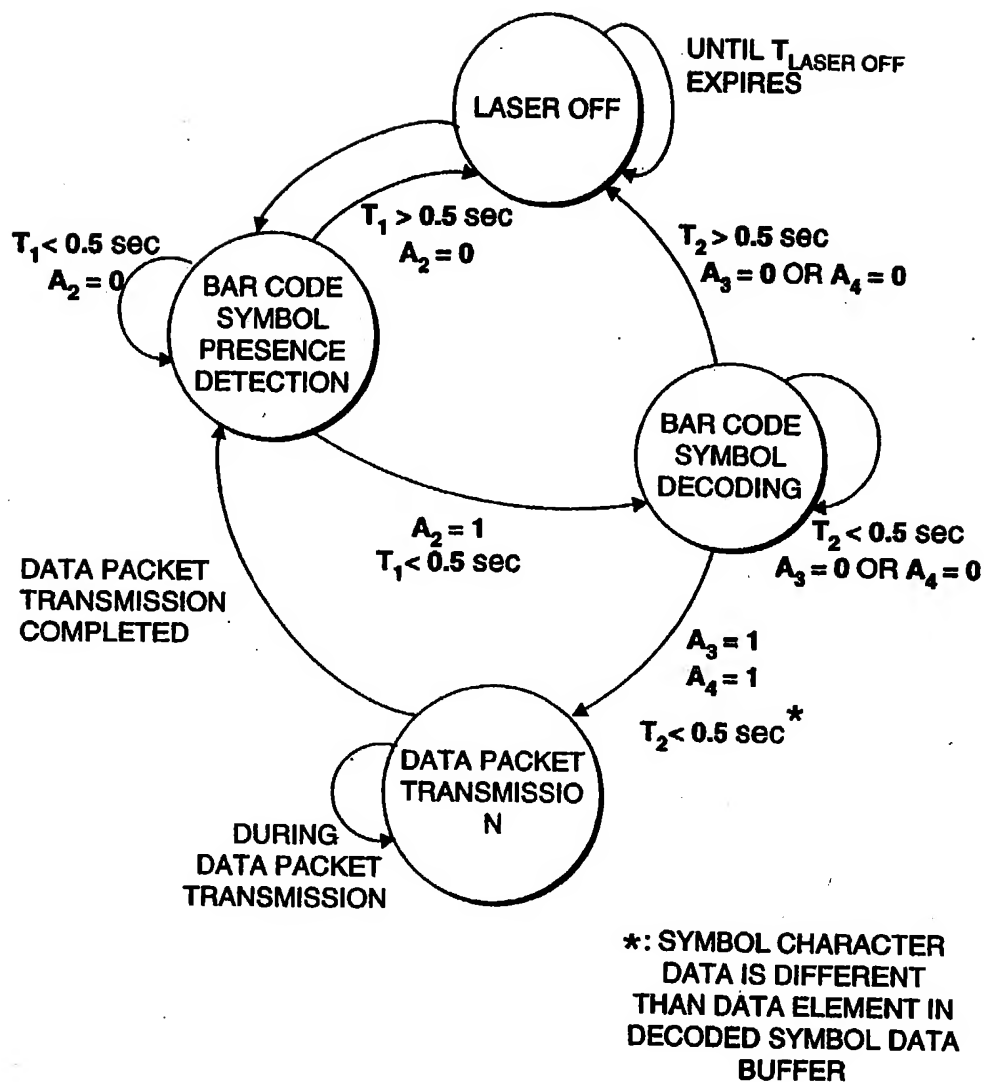


FIG. 28

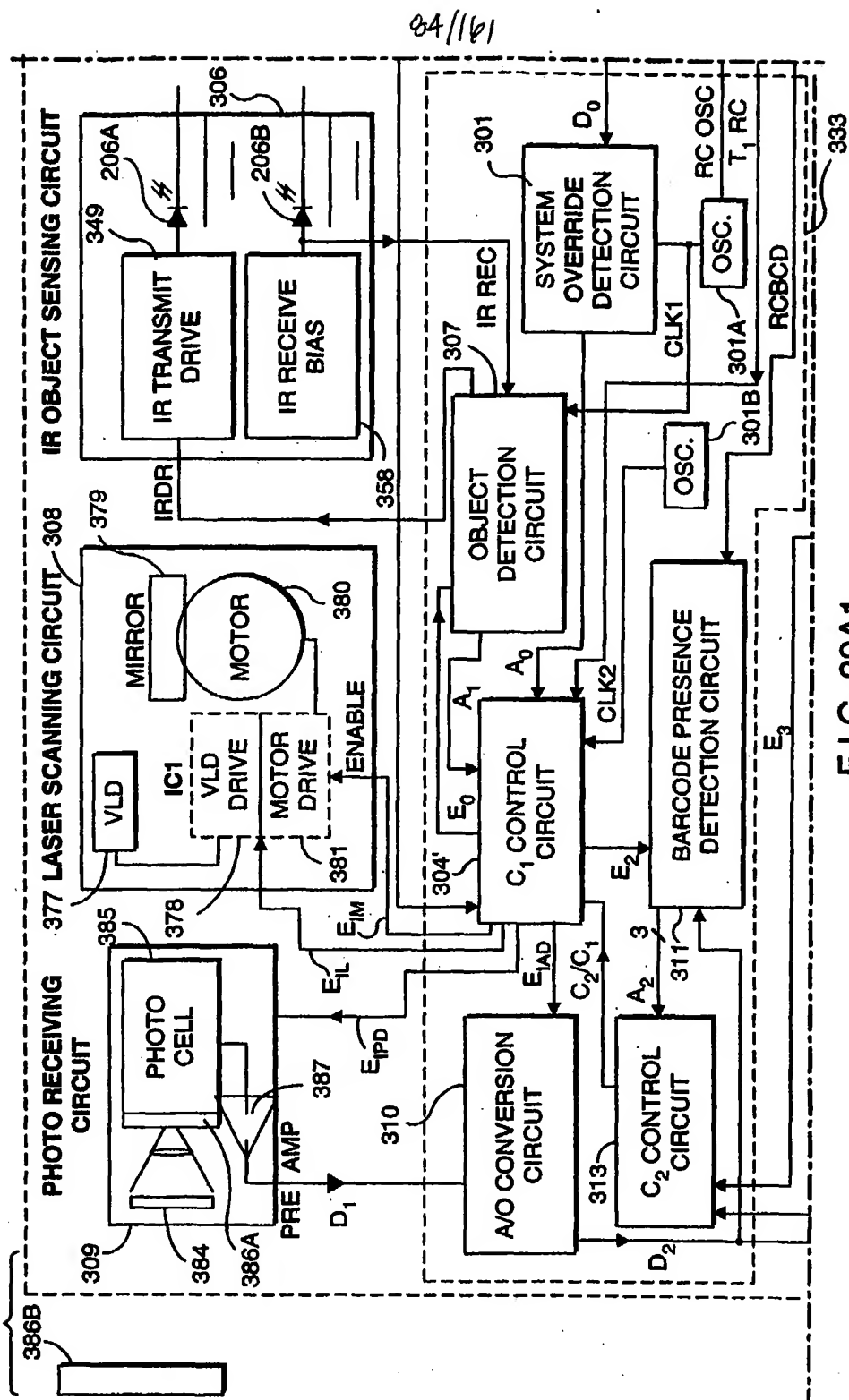


FIG. 29A1



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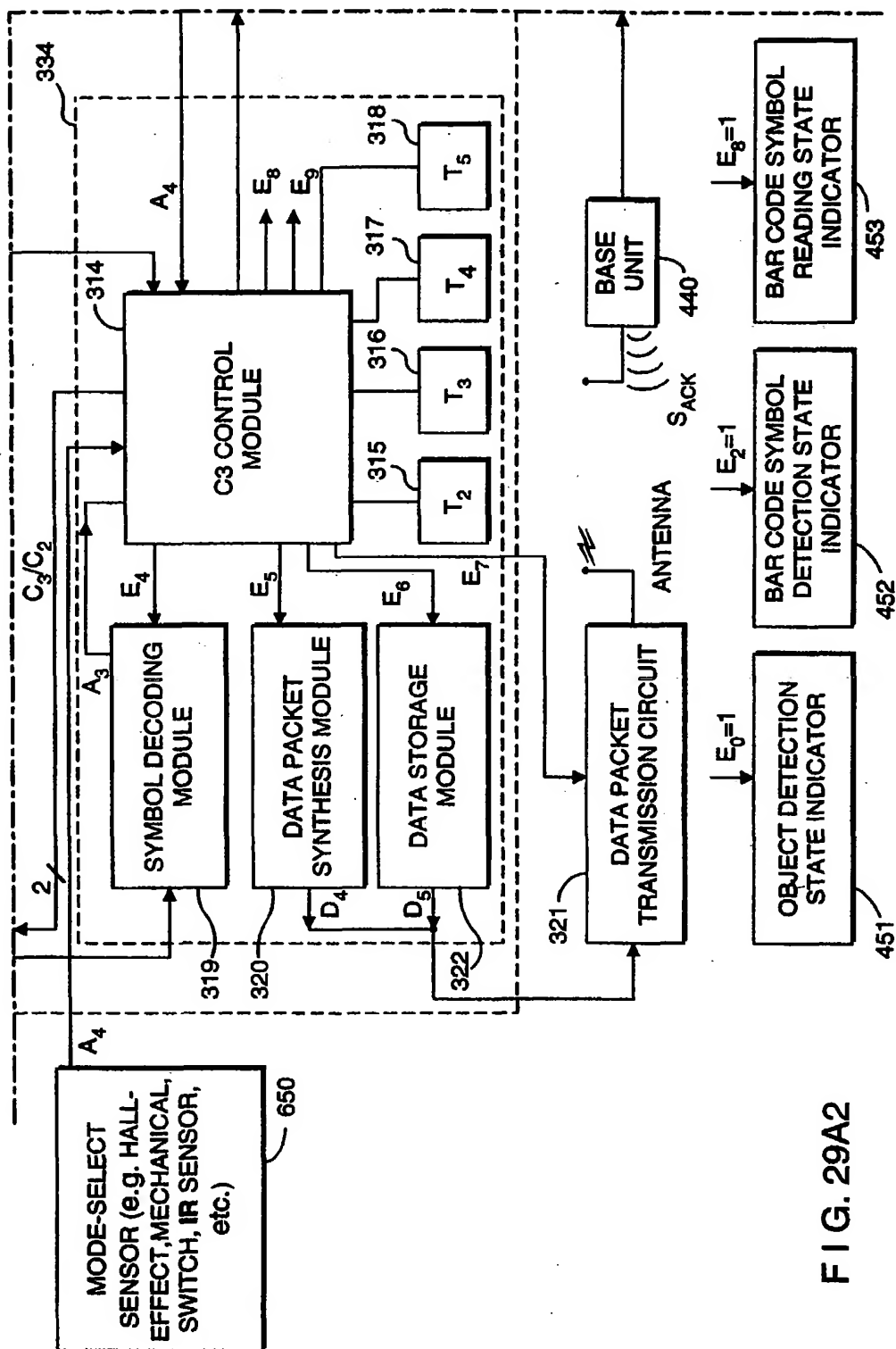


FIG. 29A2

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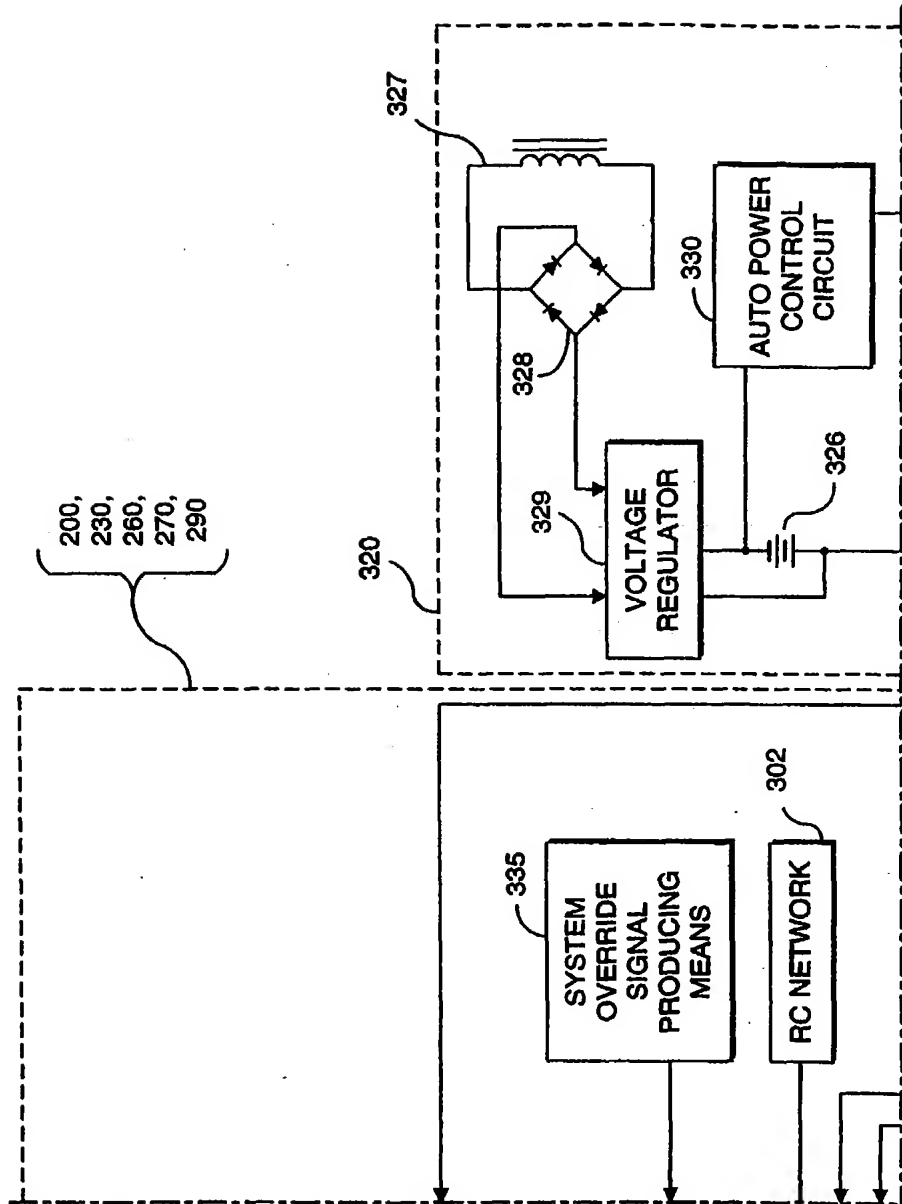
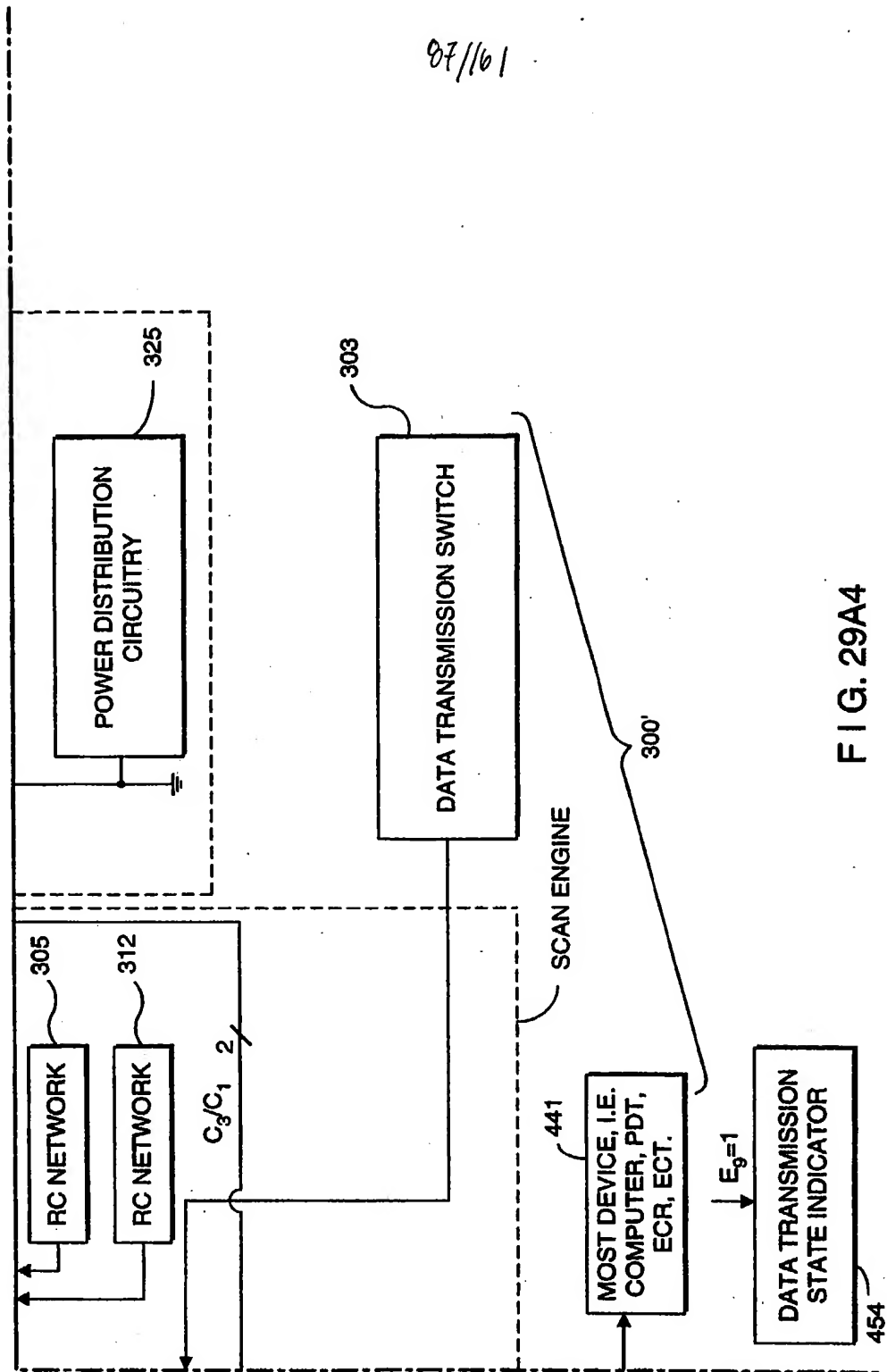


FIG. 29A3



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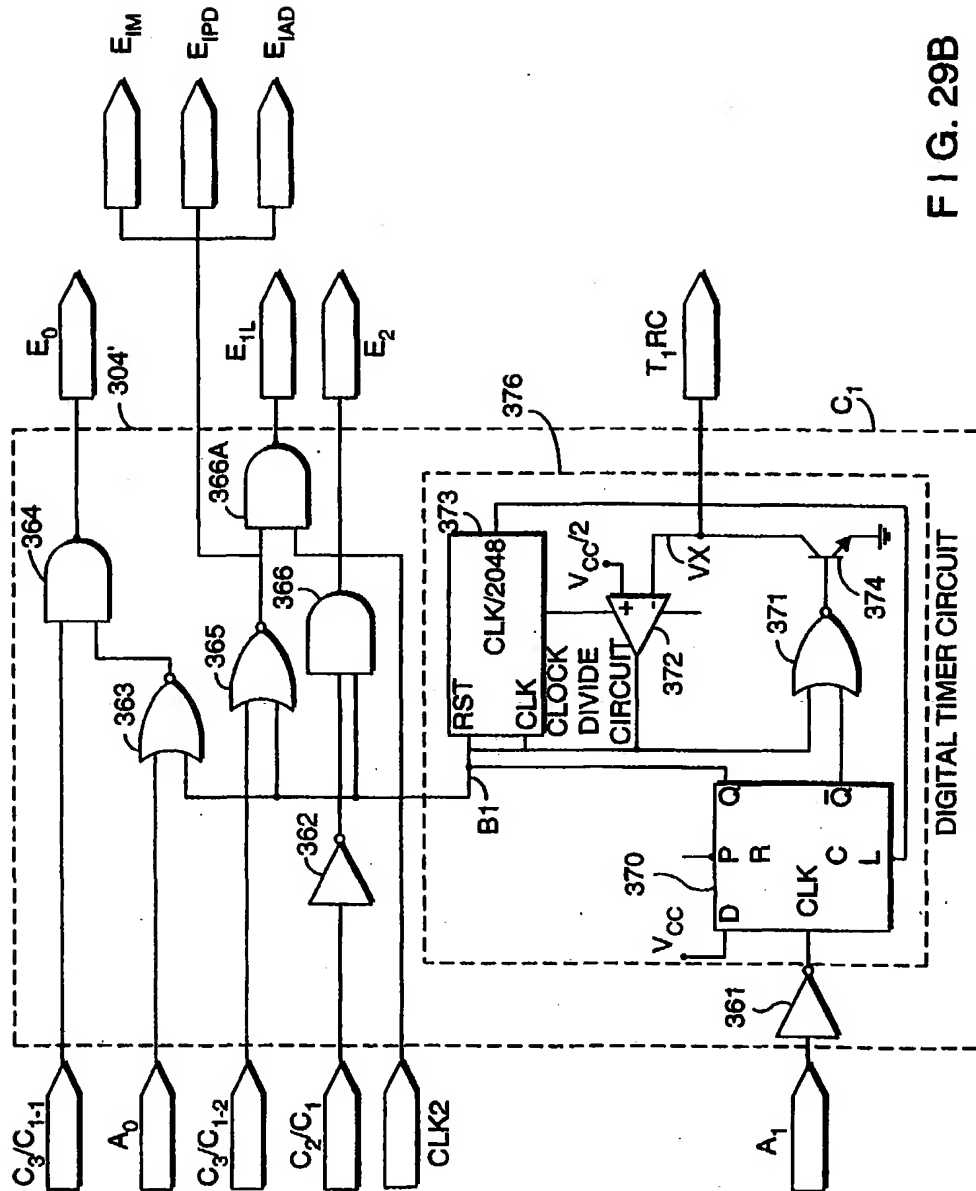


FIG. 29B

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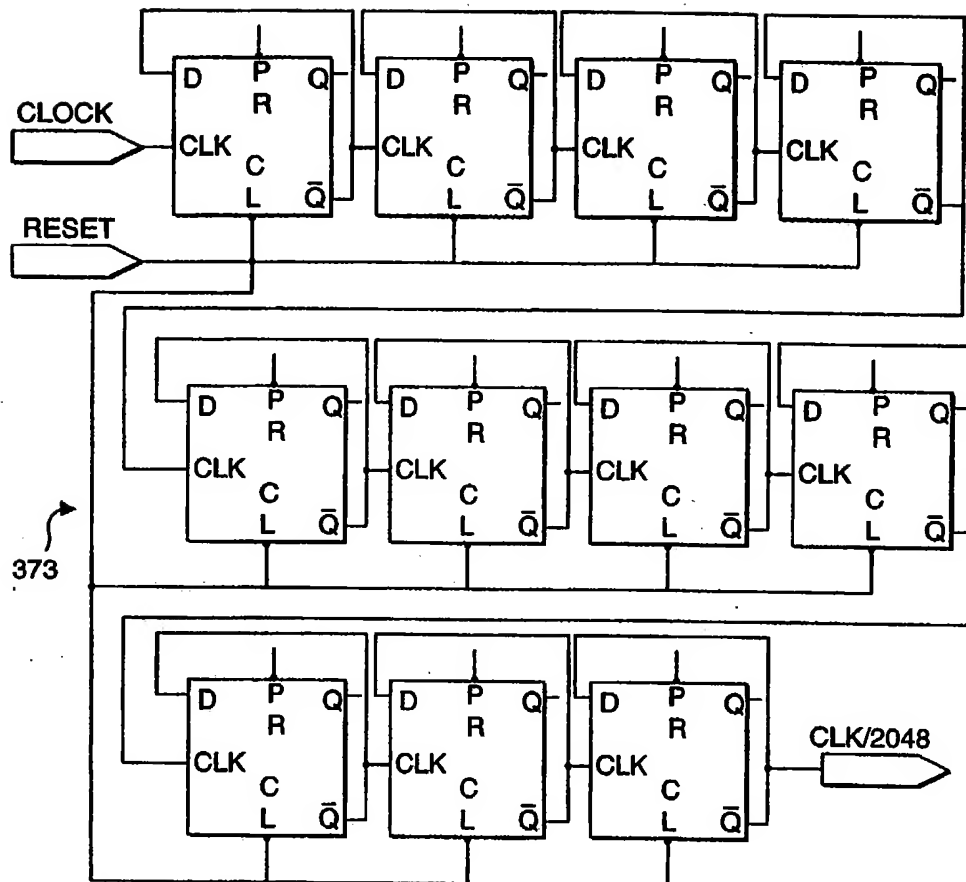


FIG. 29C

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$$\left\{ \begin{array}{l} E_0 = \overline{(B1 + A_0) (C_3 / C_{1-1})} \\ E_{IM} = E_{IPD} = E_{IAD} = \overline{(C_3 / C_{1-2}) + B1} \\ E_L = \overline{[(C_3 / C_{1-1}) + B1] [B2]} \\ E_2 = \overline{(C_2 / C_1) (B1)} \end{array} \right.$$

FIG. 29D

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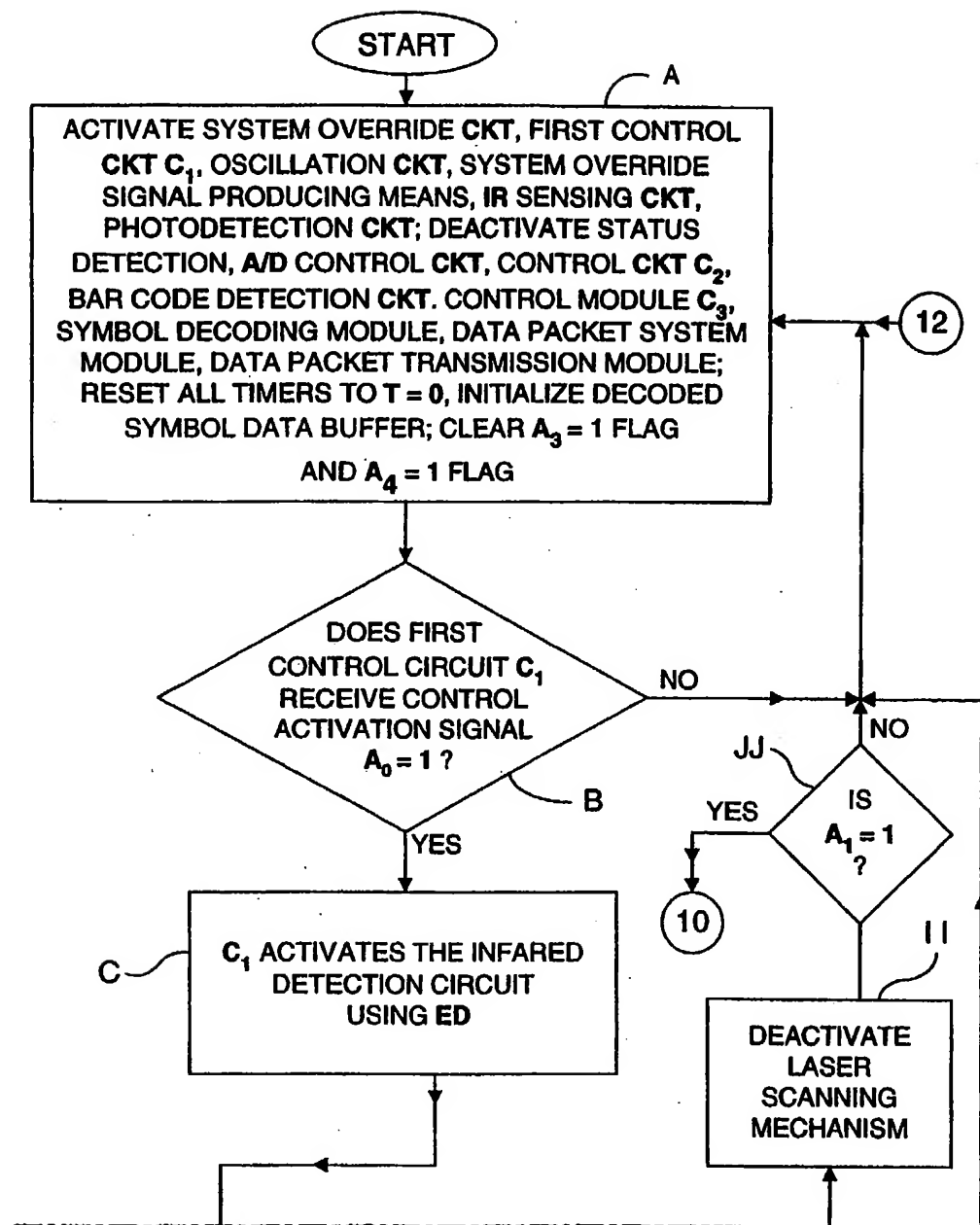


FIG. 30A1

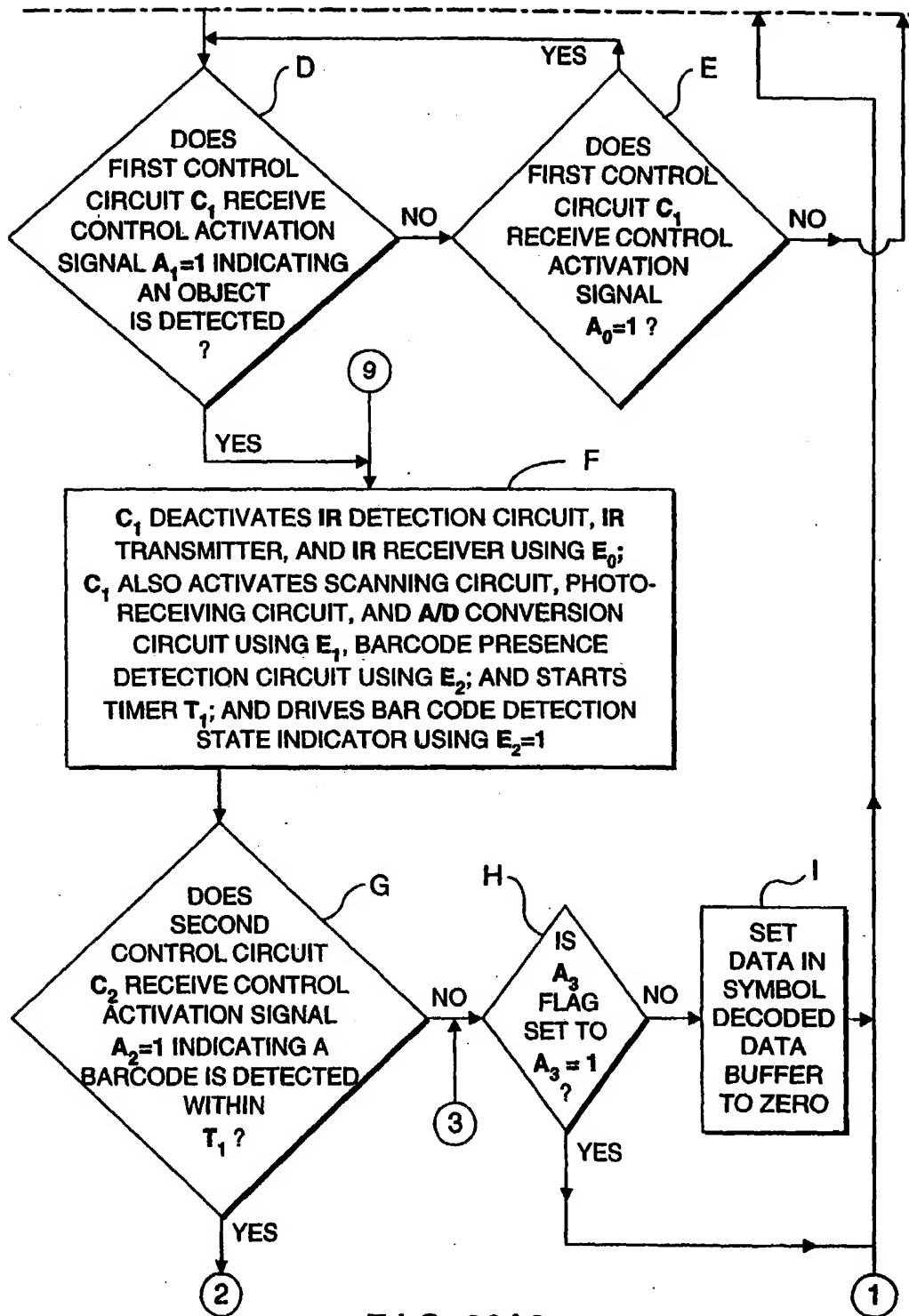


FIG. 30A2



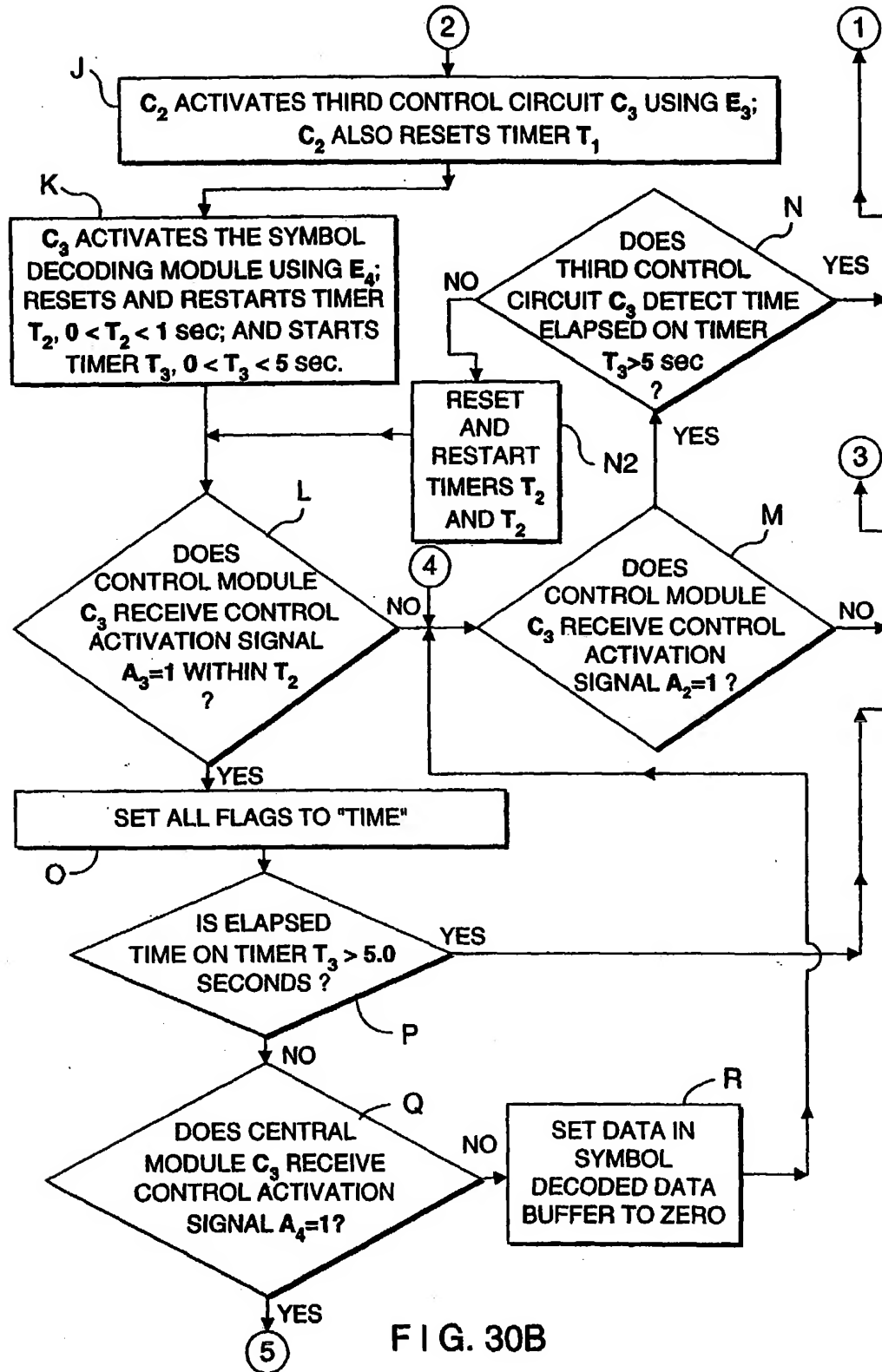


FIG. 30B

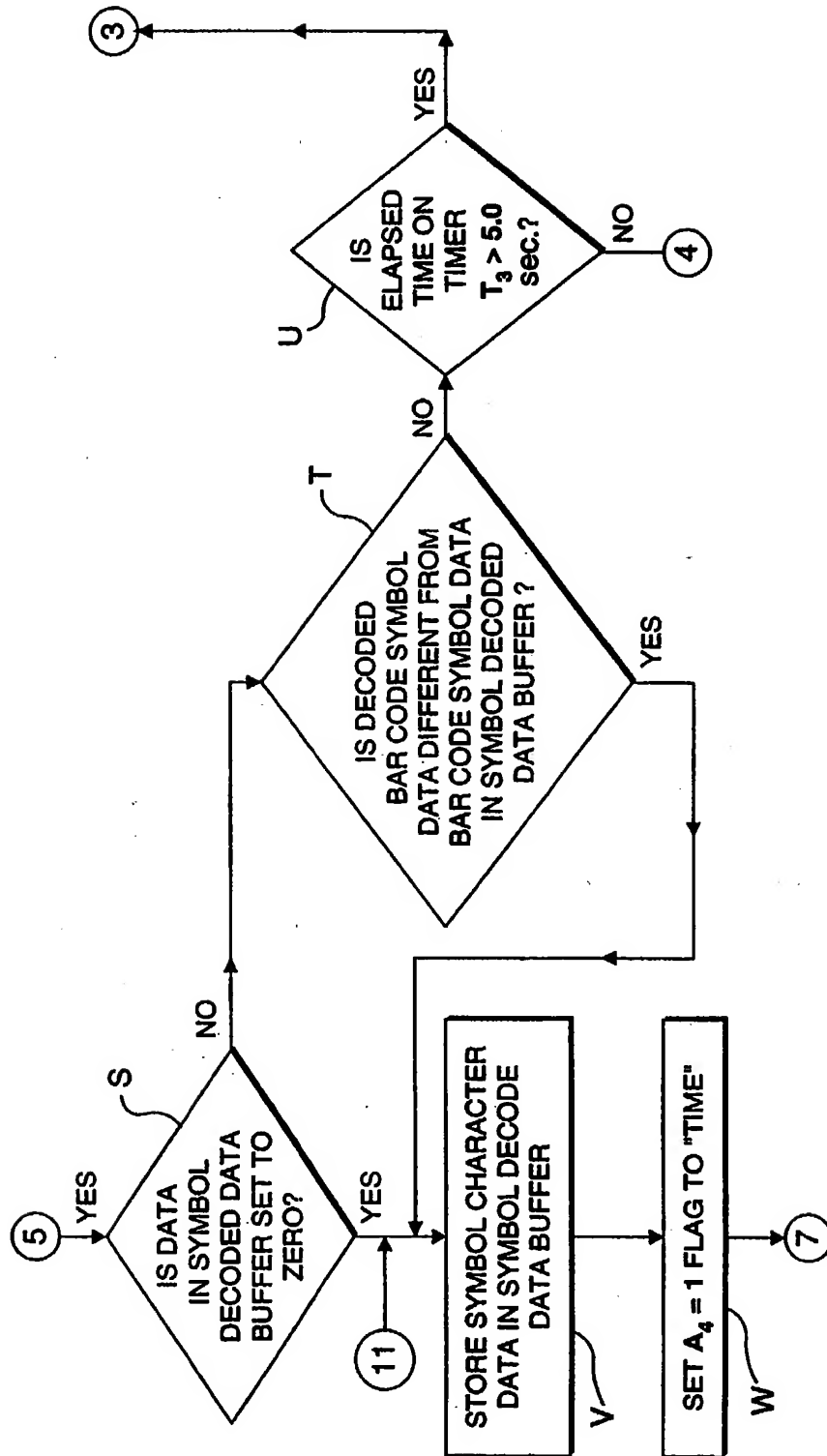


FIG. 30C

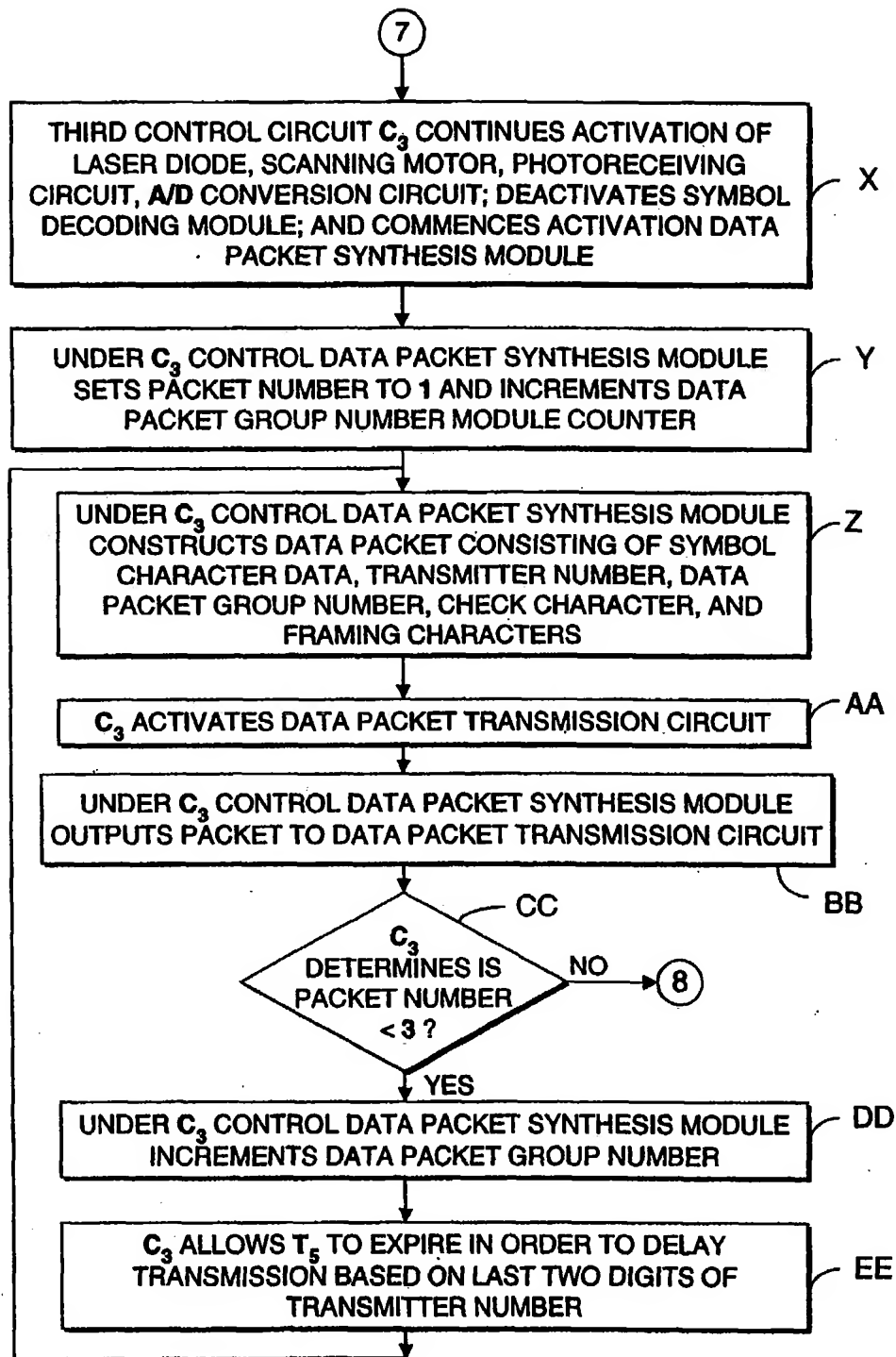


FIG. 30D

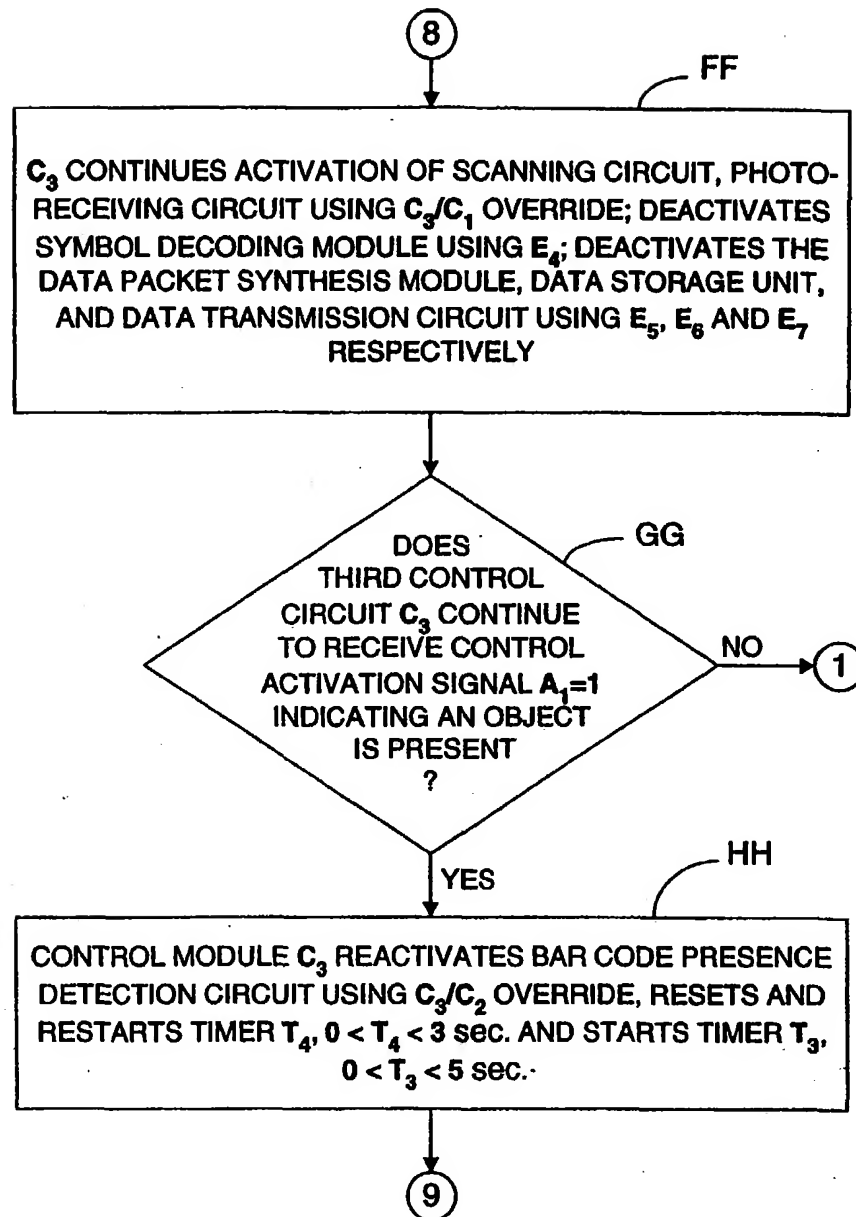


FIG. 30E

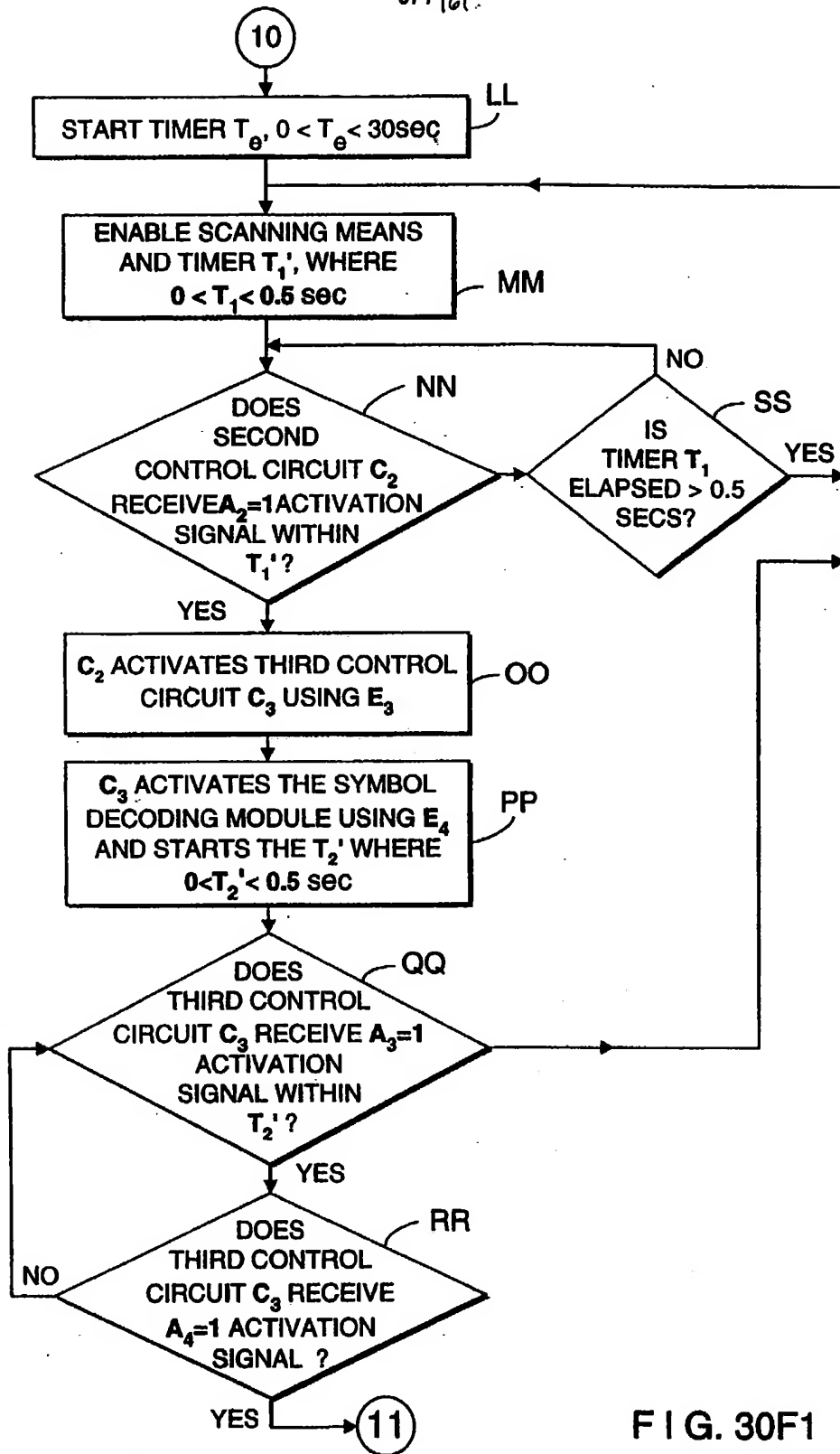
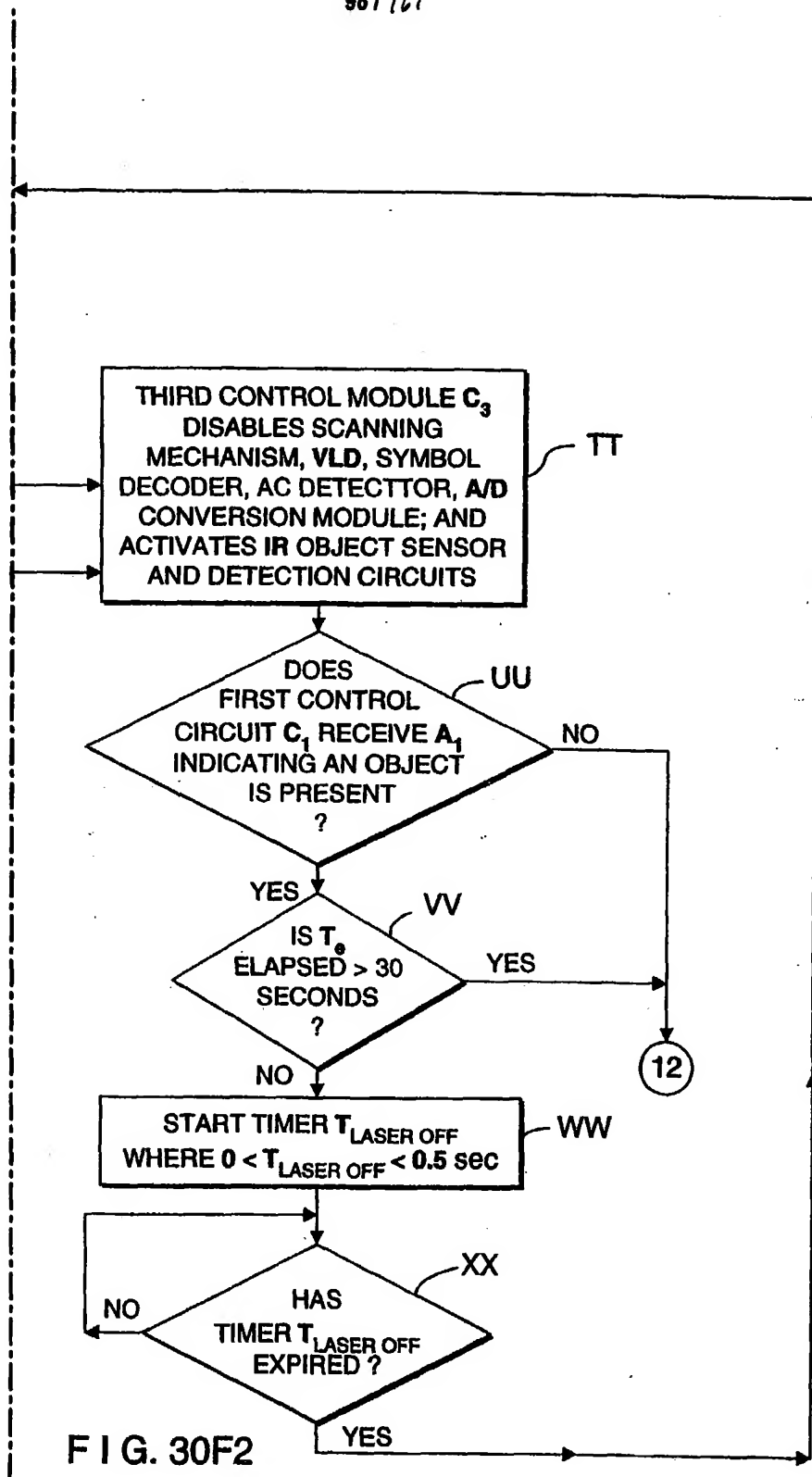


FIG. 30F1



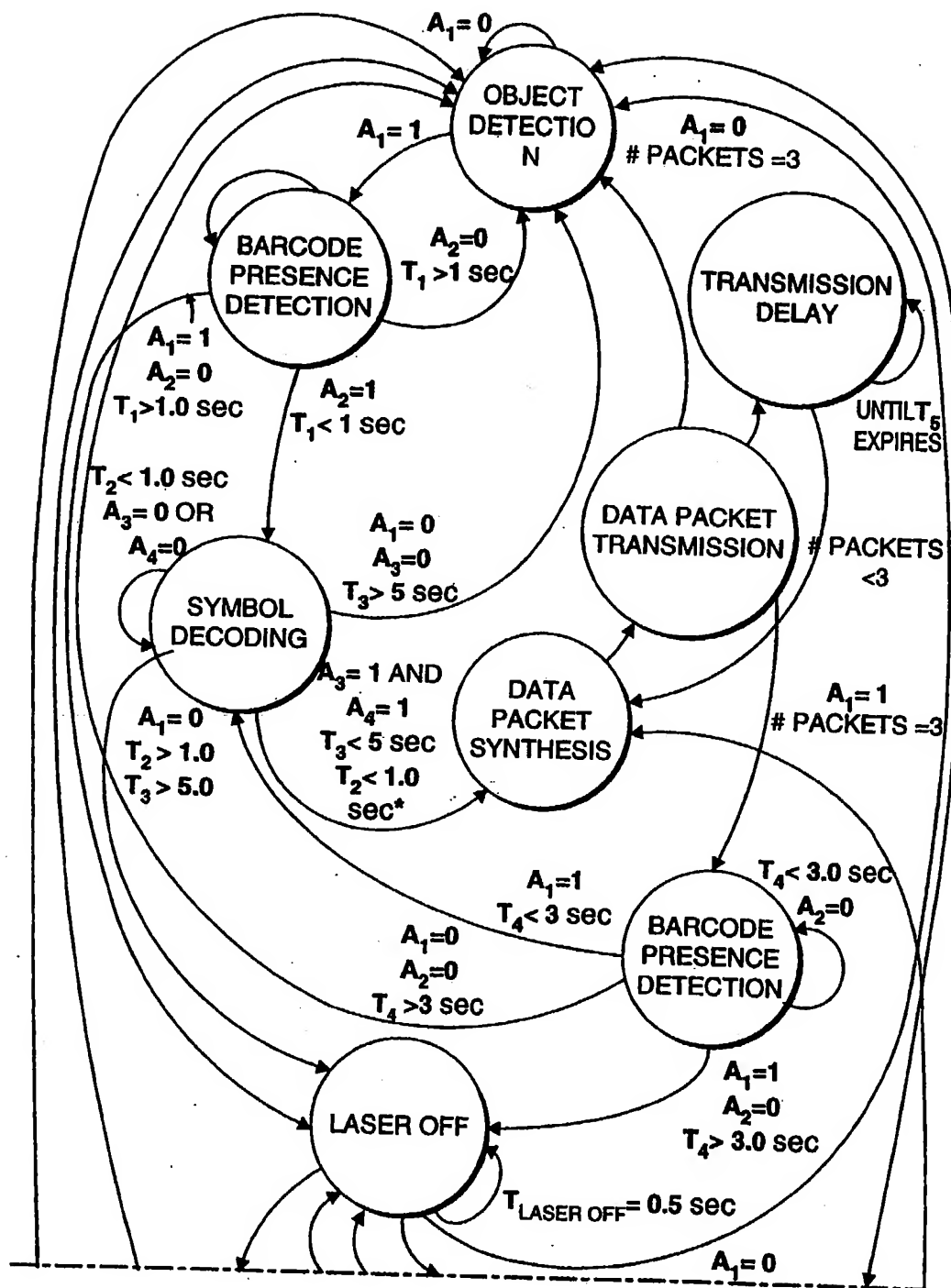


FIG. 31A

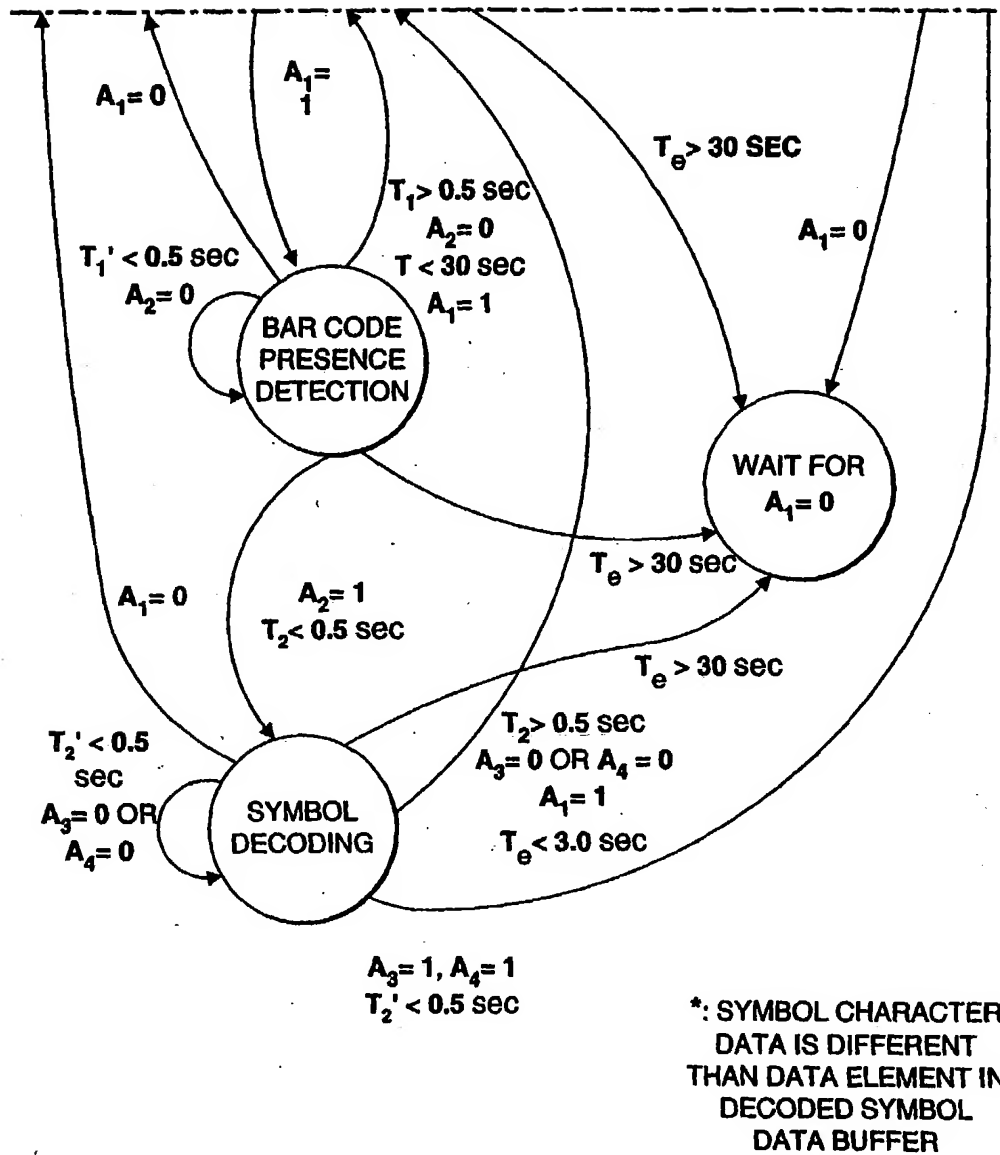


FIG. 31B



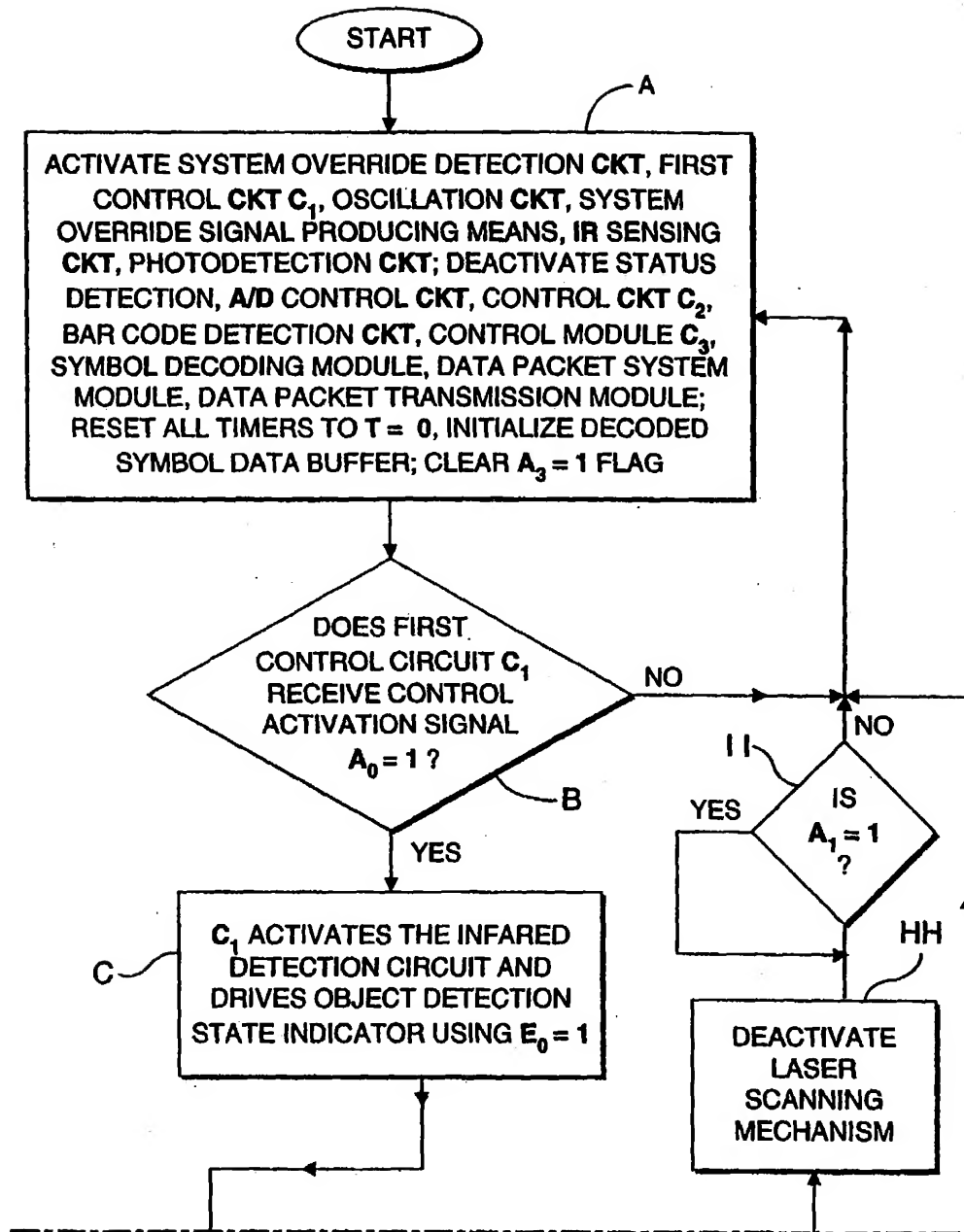


FIG. 32A1

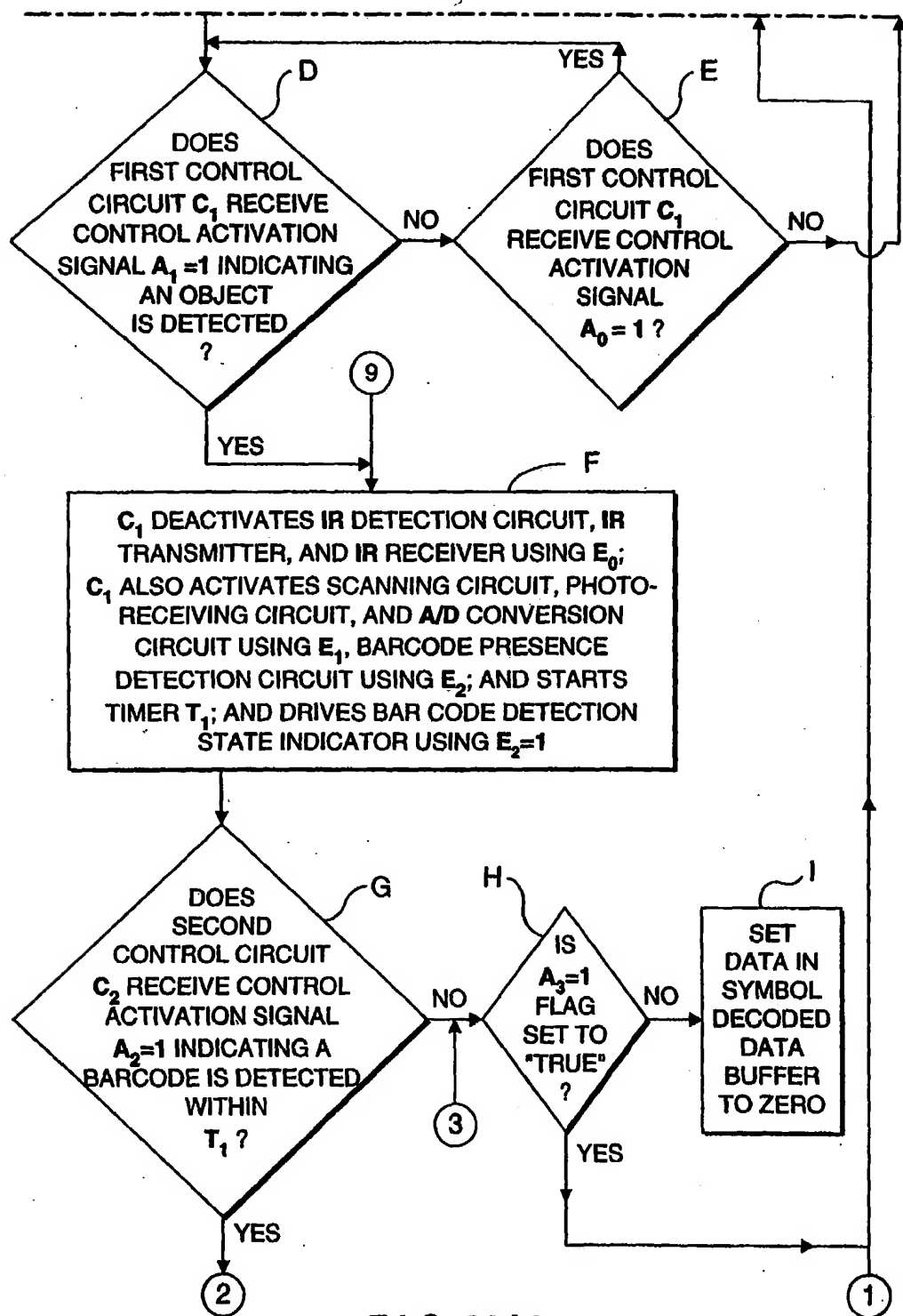


FIG. 32A2

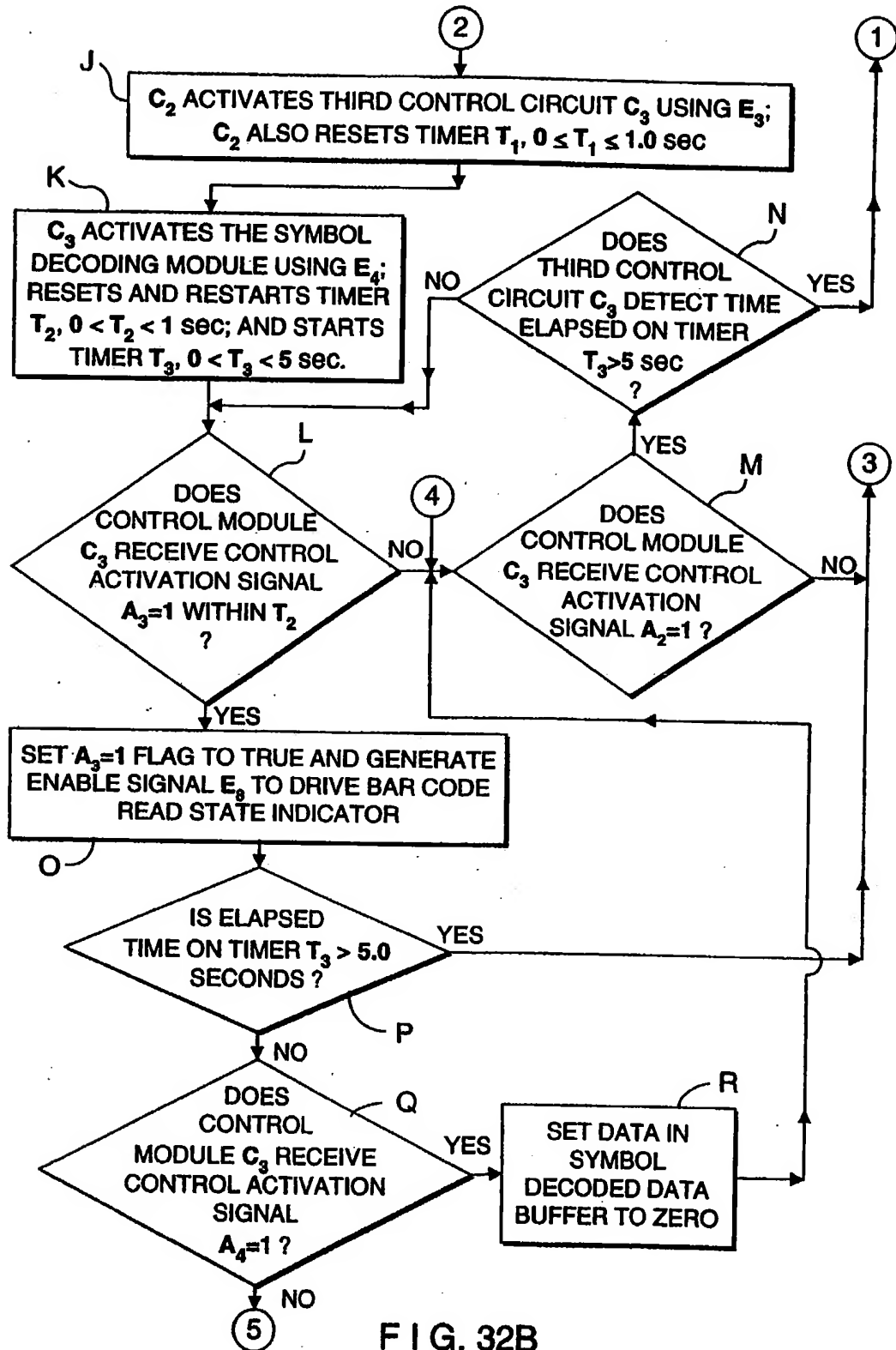


FIG. 32B

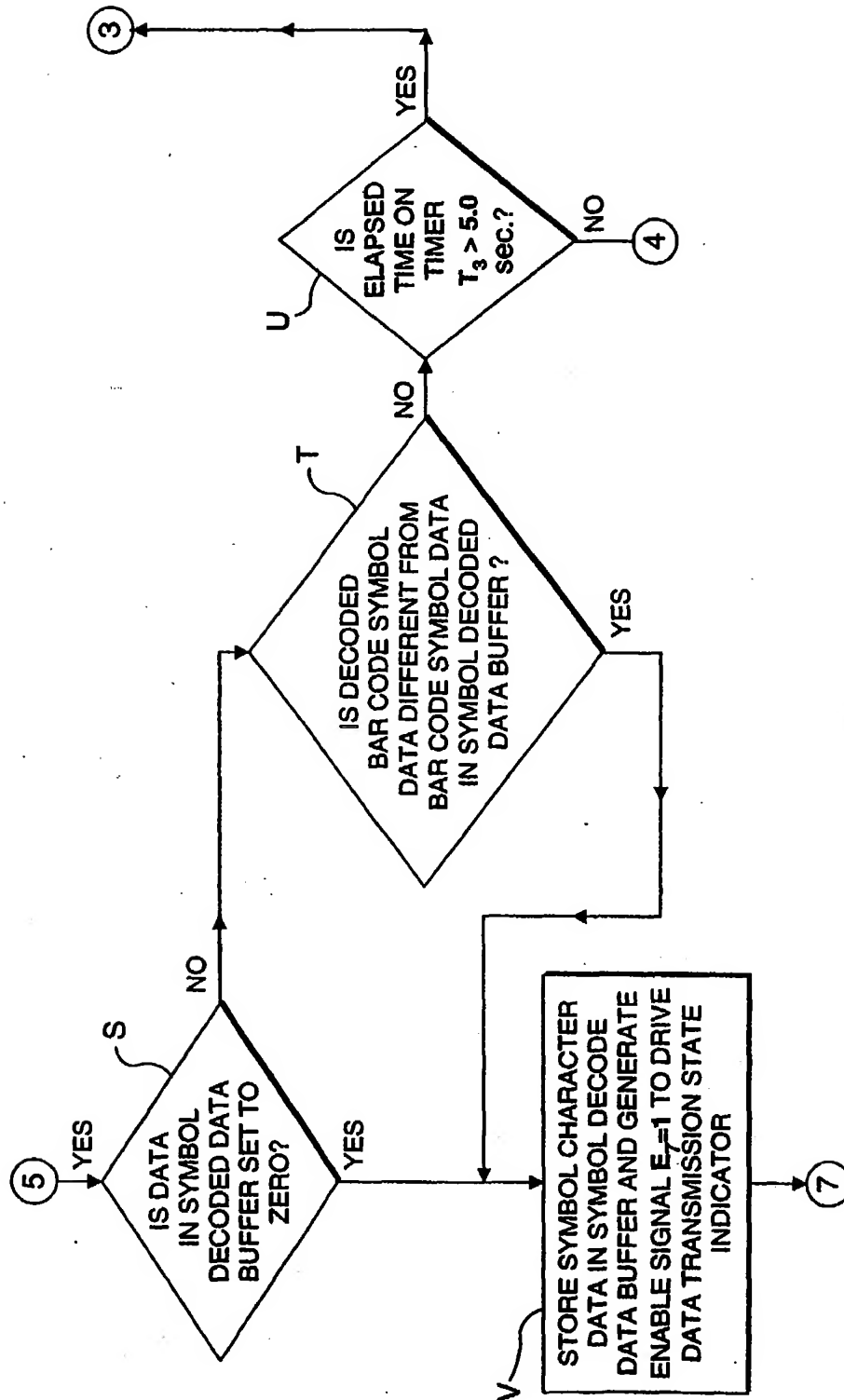


FIG. 32C

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7

THIRD CONTROL CIRCUIT  $C_3$  CONTINUES ACTIVATION OF LASER DIODE, SCANNING MOTOR, PHOTORECEIVING CIRCUIT, A/D CONVERSION CIRCUIT; DEACTIVATES SYMBOL DECODING MODULE; AND COMMENCES ACTIVATION DATA PACKET SYNTHESIS MODULE

W

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE SETS PACKET NUMBER TO 1 AND INCREMENTS DATA PACKET GROUP NUMBER MODULE COUNTER

X

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE CONSTRUCTS DATA PACKET CONSISTING OF SYMBOL CHARACTER DATA, TRANSMITTER NUMBER, DATA PACKET GROUP NUMBER, CHECK CHARACTER AND FRAMING CHARACTERS

Y

$C_3$  ACTIVATES DATA PACKET TRANSMISSION CIRCUIT

Z

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE OUTPUTS PACKET TO DATA PACKET TRANSMISSION CIRCUIT

AA

$C_3$  DETERMINES IS PACKET NUMBER  $< 3$  ?

BB

NO

8

YES

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE INCREMENTS DATA PACKET GROUP NUMBER

CC

$C_3$  ALLOWS  $T_5$  TO EXPIRE IN ORDER TO DELAY TRANSMISSION BASED ON LAST TWO DIGITS OF TRANSMITTER NUMBER

DD

FIG. 32D

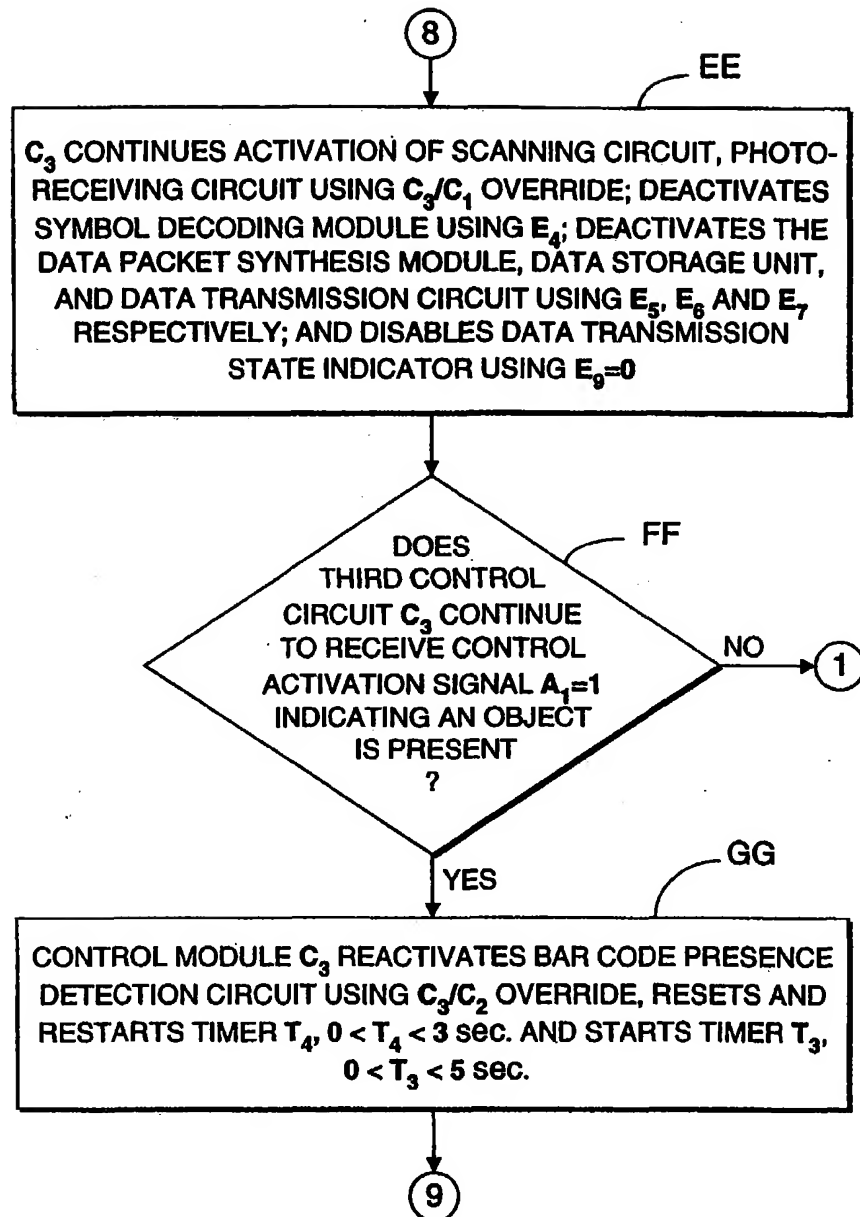


FIG. 32E

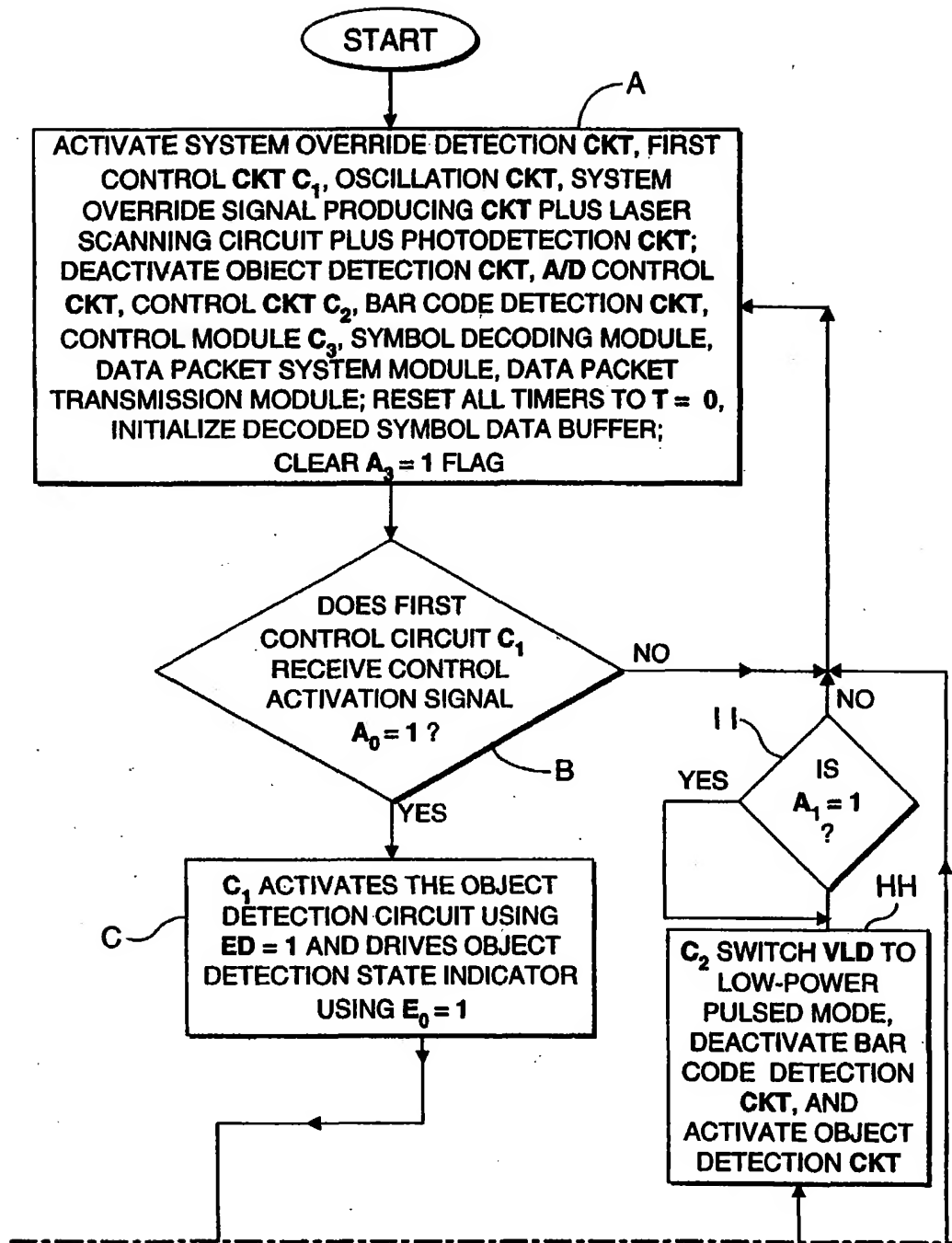


FIG. 33A1

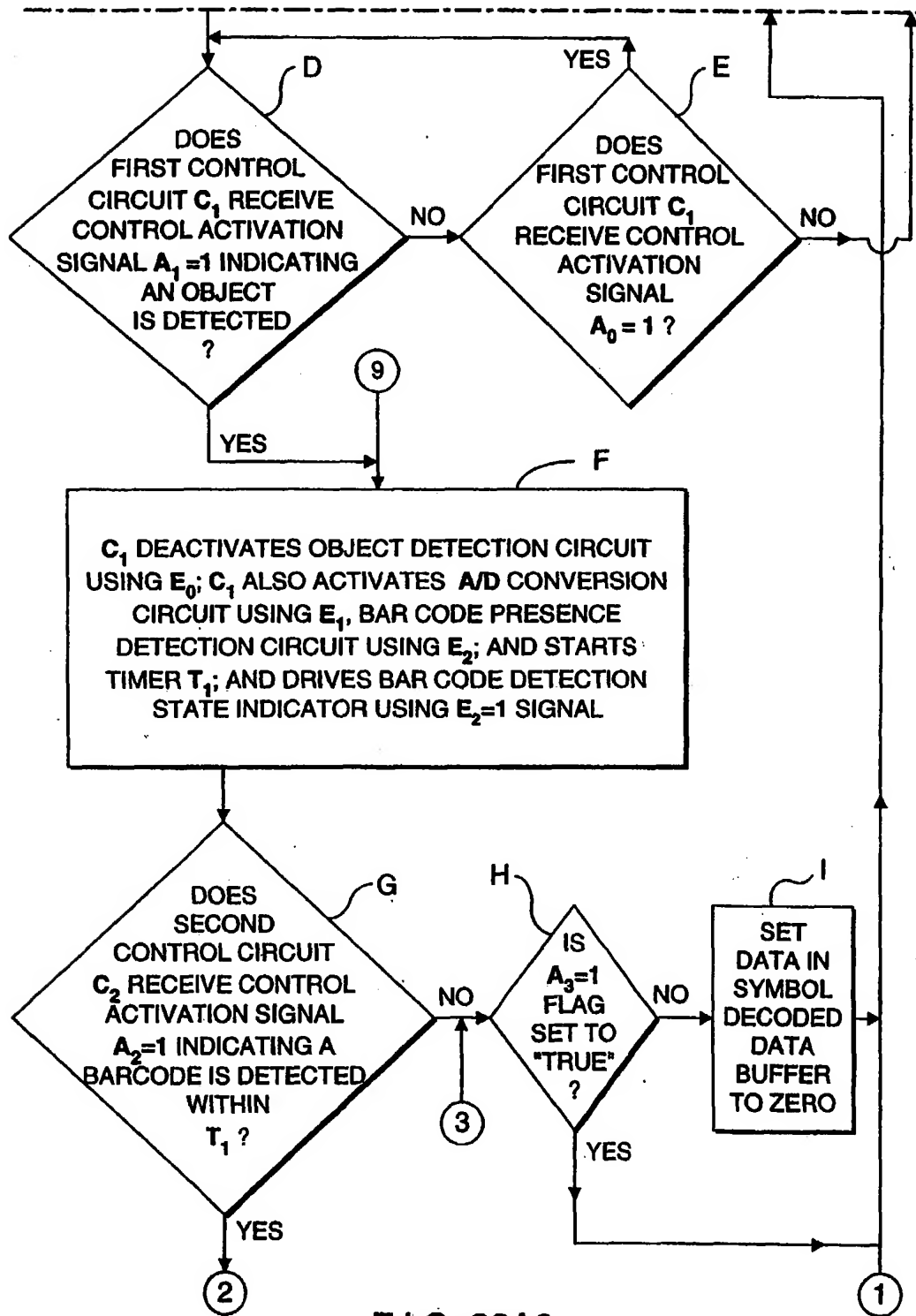


FIG. 33A2



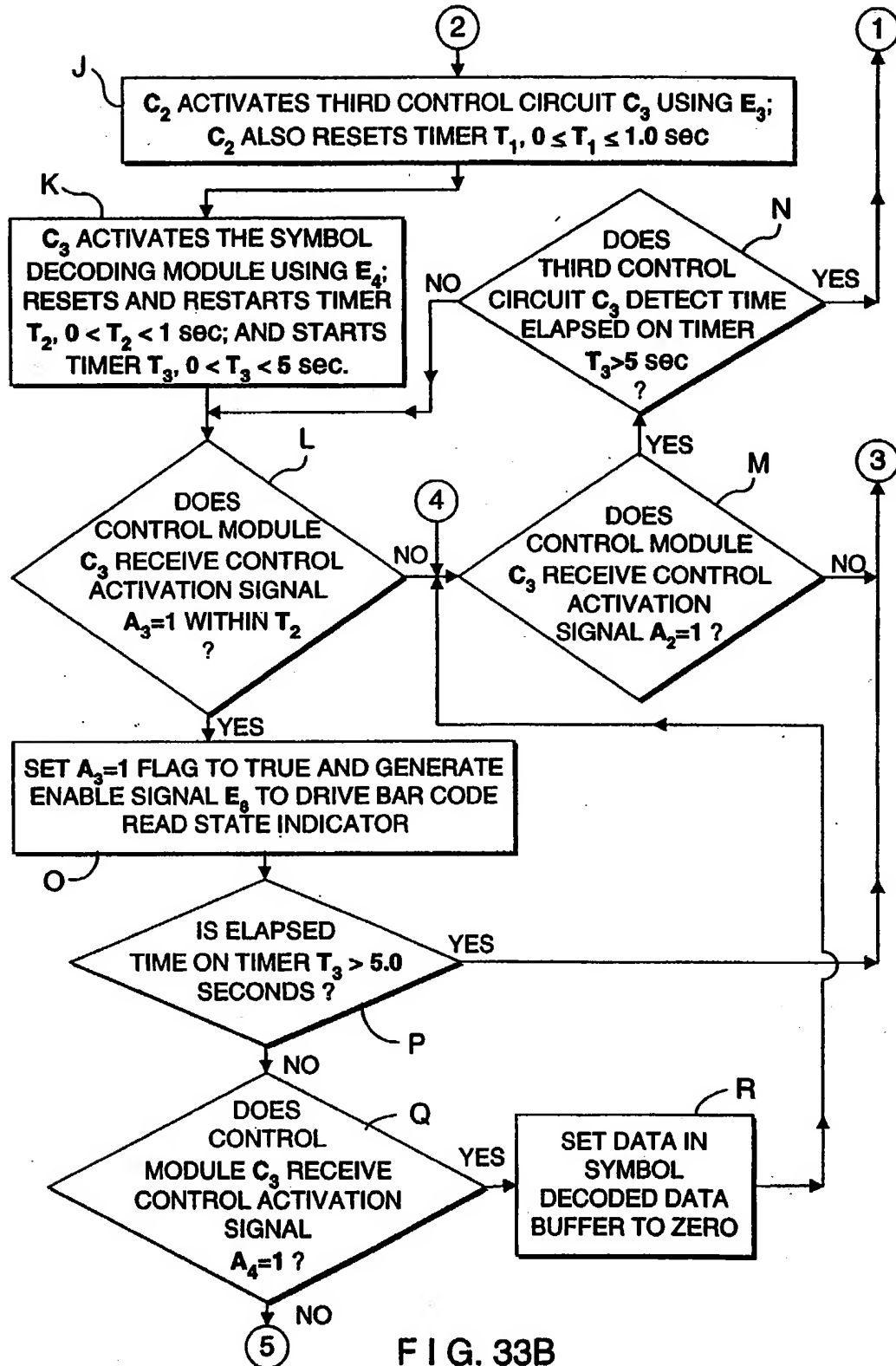
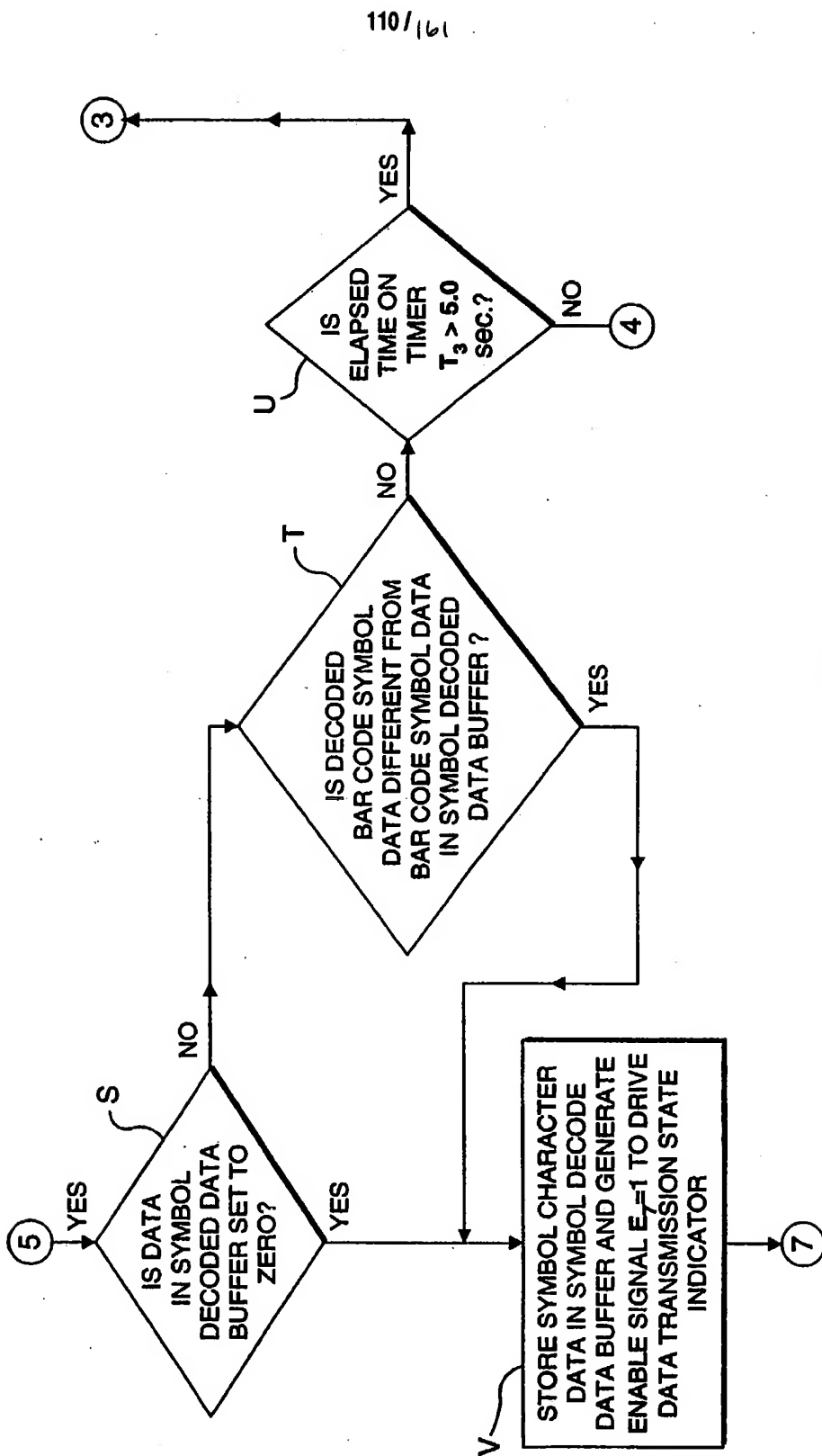


FIG. 33B



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7

THIRD CONTROL CIRCUIT  $C_3$  CONTINUES ACTIVATION OF LASER DIODE, SCANNING MOTOR, PHOTORECEIVING CIRCUIT, A/D CONVERSION CIRCUIT; DEACTIVATES SYMBOL DECODING MODULE; AND COMMENCES ACTIVATION DATA PACKET SYNTHESIS MODULE

W

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE SETS PACKET NUMBER TO 1 AND INCREMENTS DATA PACKET GROUP NUMBER MODULE COUNTER

X

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE CONSTRUCTS DATA PACKET CONSISTING OF SYMBOL CHARACTER DATA, TRANSMITTER NUMBER, DATA PACKET GROUP NUMBER, CHECK CHARACTER AND FRAMING CHARACTERS

Y

$C_3$  ACTIVATES DATA PACKET TRANSMISSION CIRCUIT

Z

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE OUTPUTS PACKET TO DATA PACKET TRANSMISSION CIRCUIT

AA

$C_3$  DETERMINES IS PACKET NUMBER  $< 3$  ?

BB

NO → 8

YES

UNDER  $C_3$  CONTROL DATA PACKET SYNTHESIS MODULE INCREMENTS DATA PACKET GROUP NUMBER

CC

$C_3$  ALLOWS  $T_5$  TO EXPIRE IN ORDER TO DELAY TRANSMISSION BASED ON LAST TWO DIGITS OF TRANSMITTER NUMBER

DD

FIG. 33D

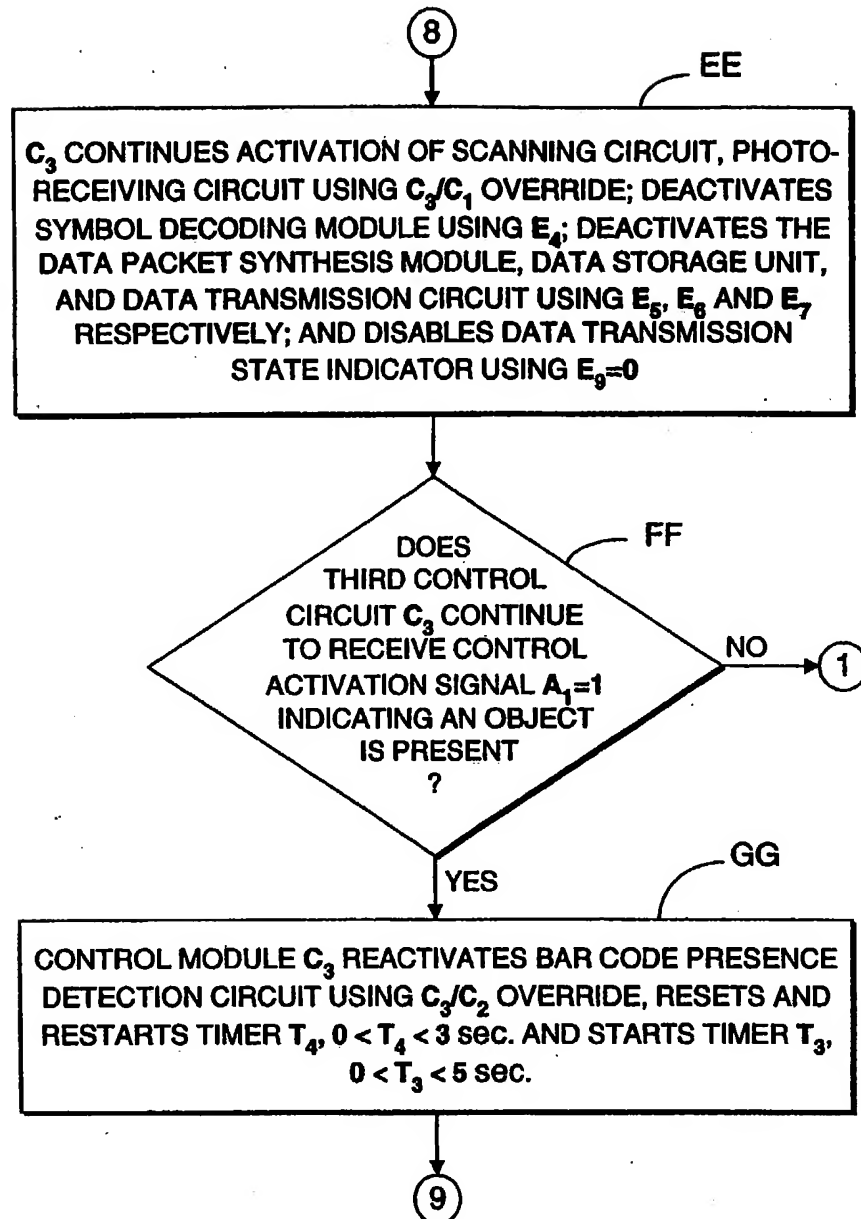
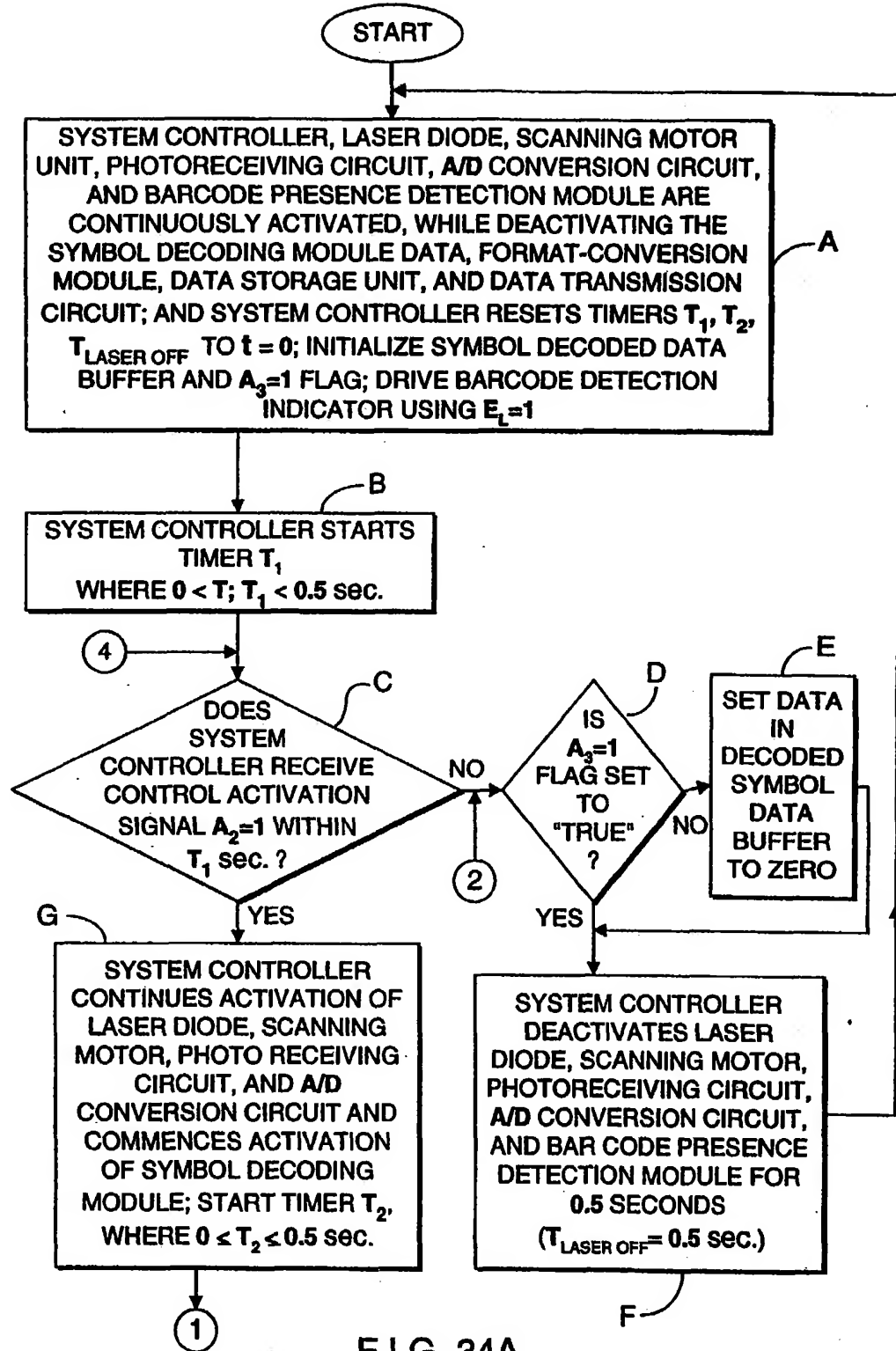


FIG. 33E



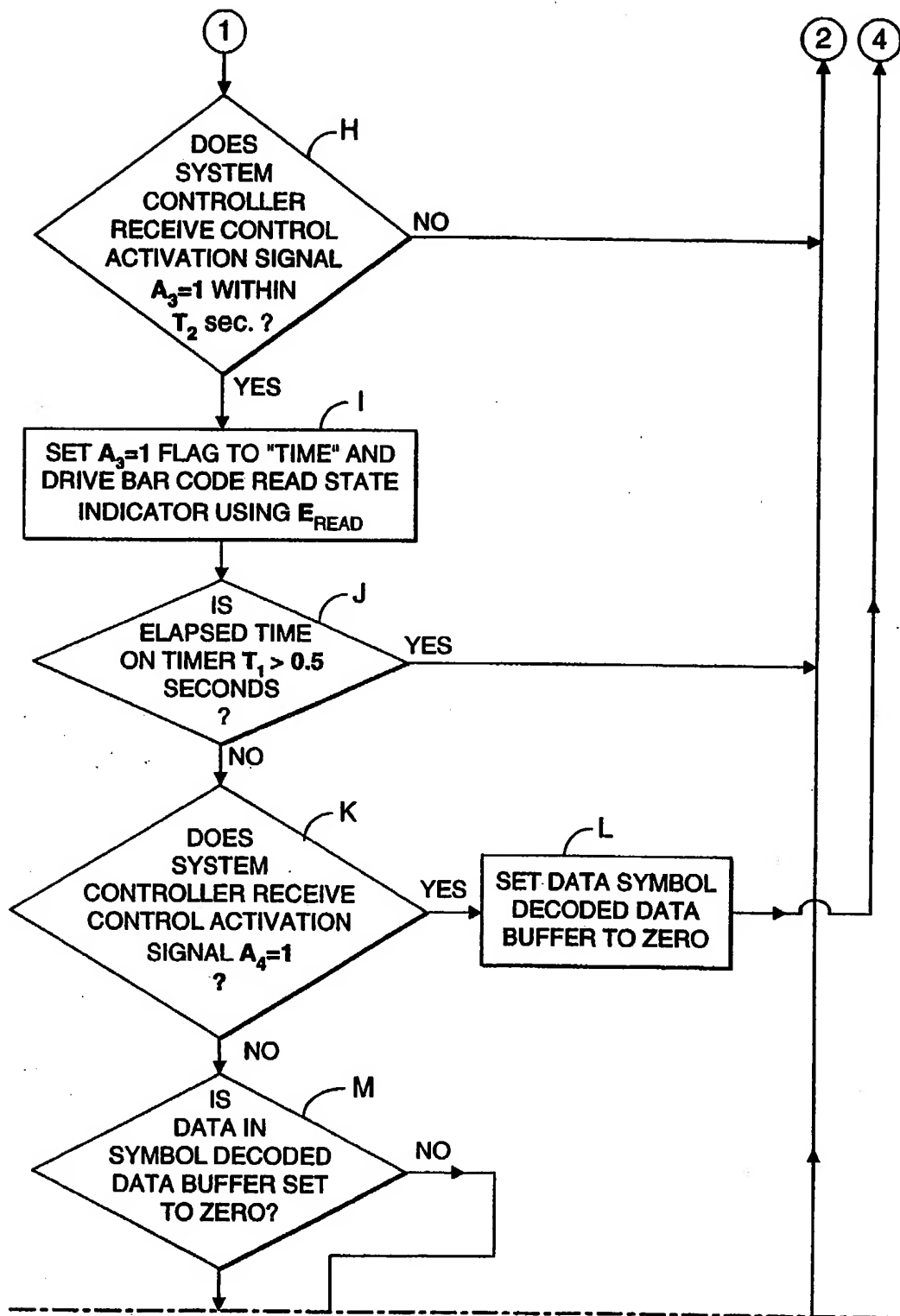


FIG. 34B1

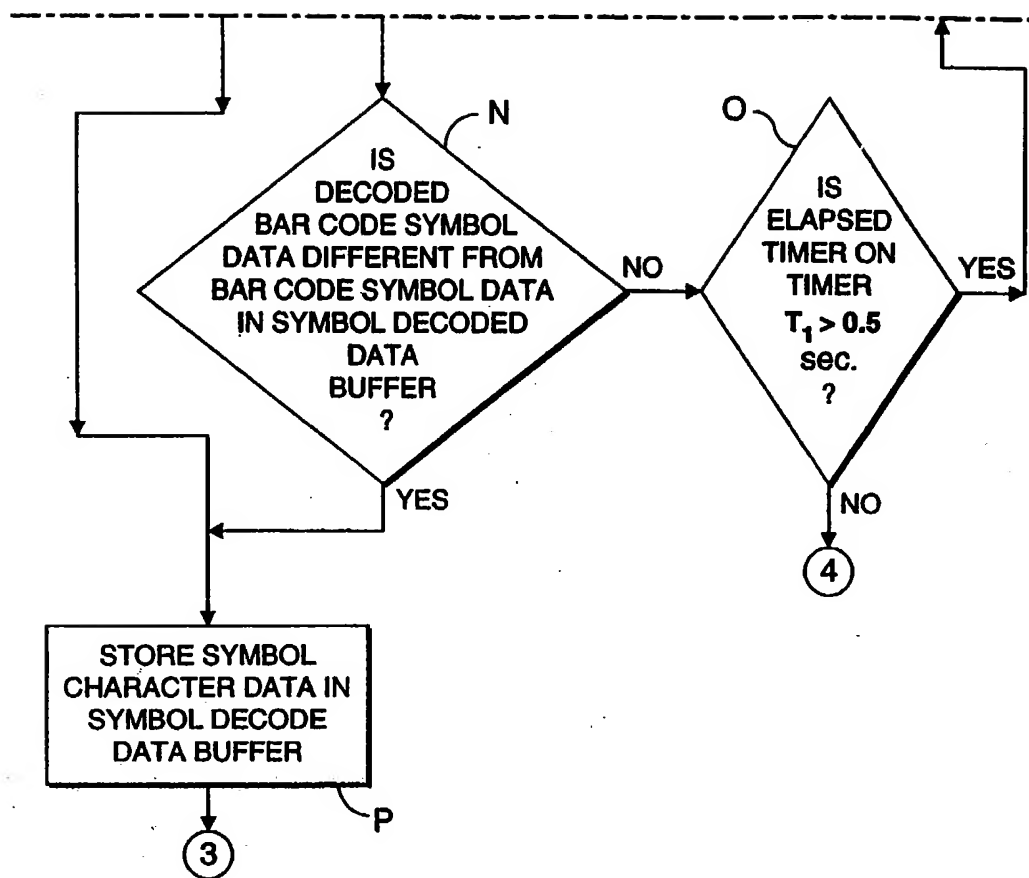


FIG. 34B2

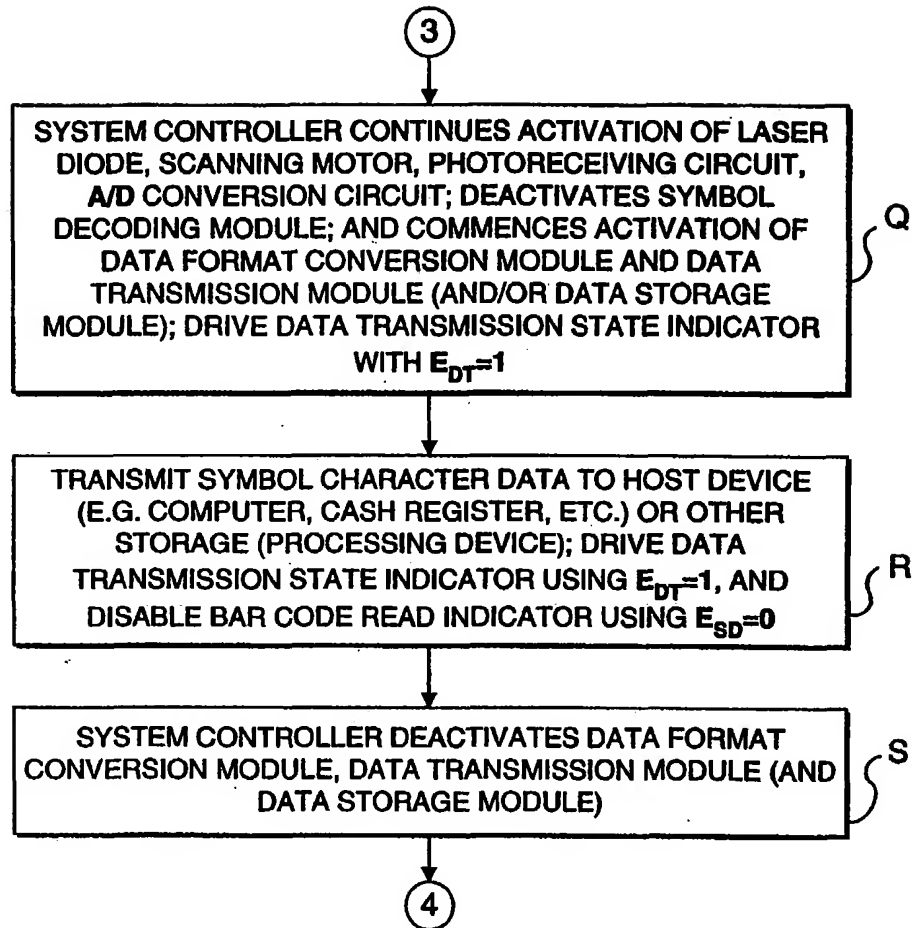


FIG. 34C



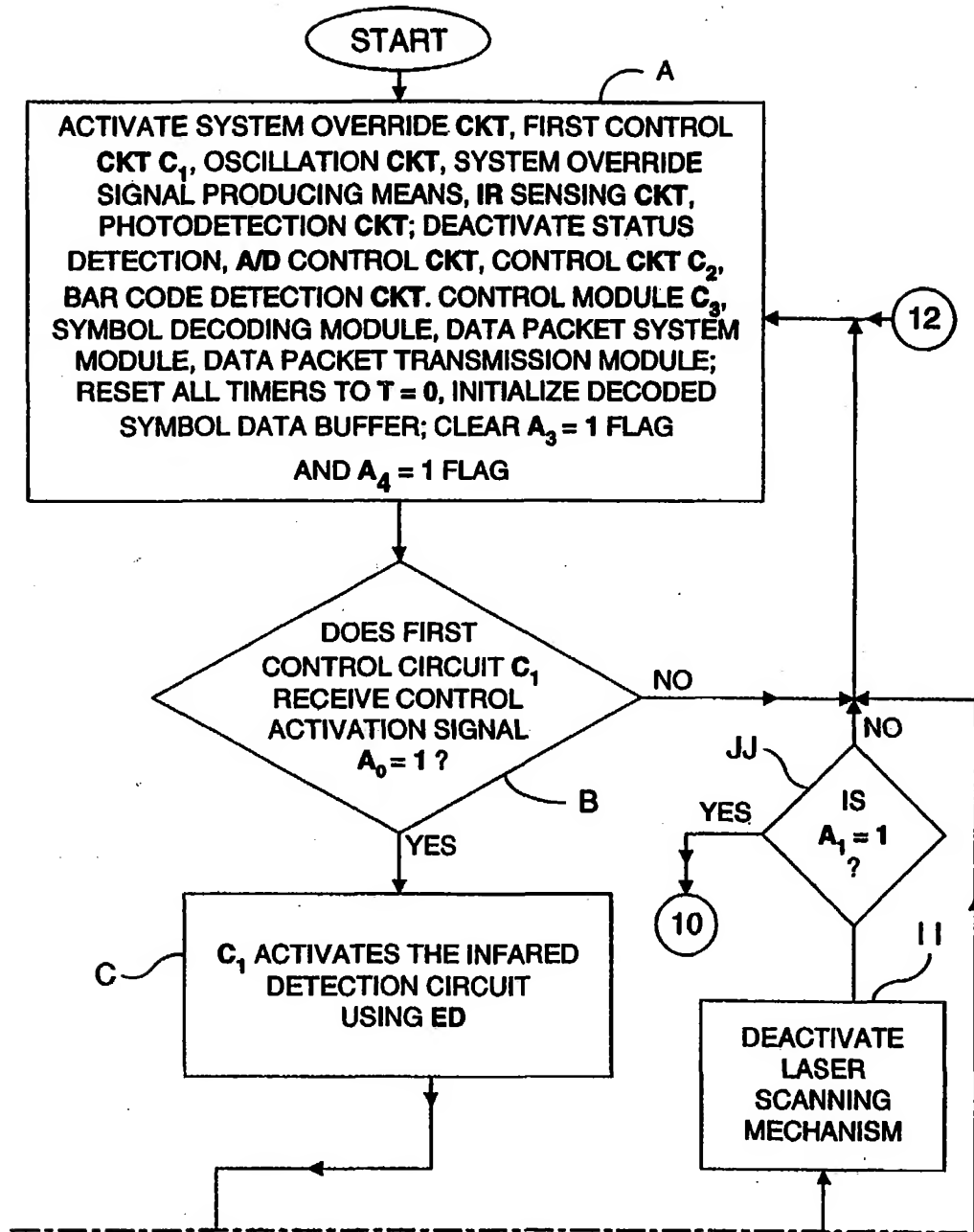


FIG. 35A1

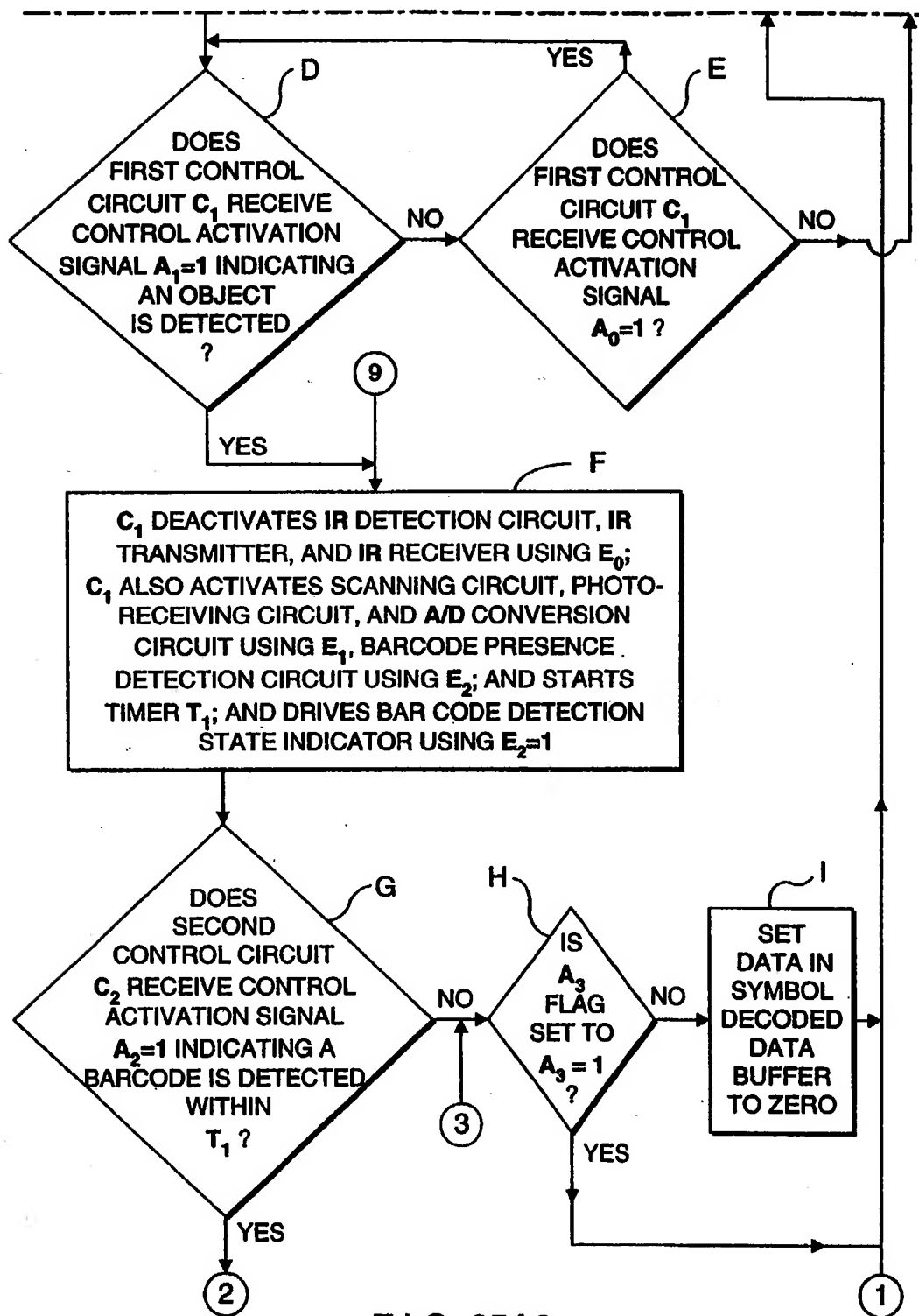


FIG. 35A2

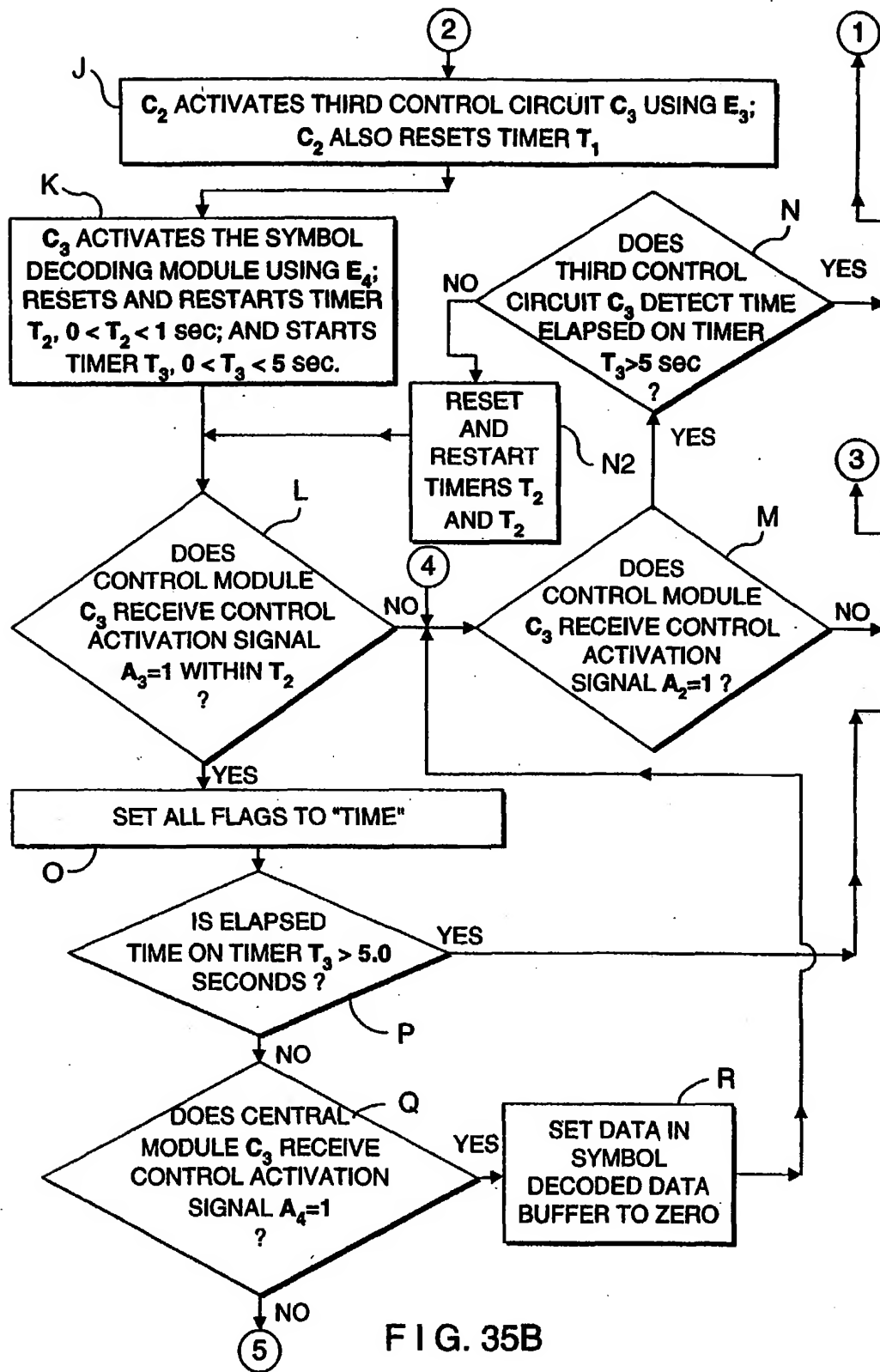


FIG. 35B

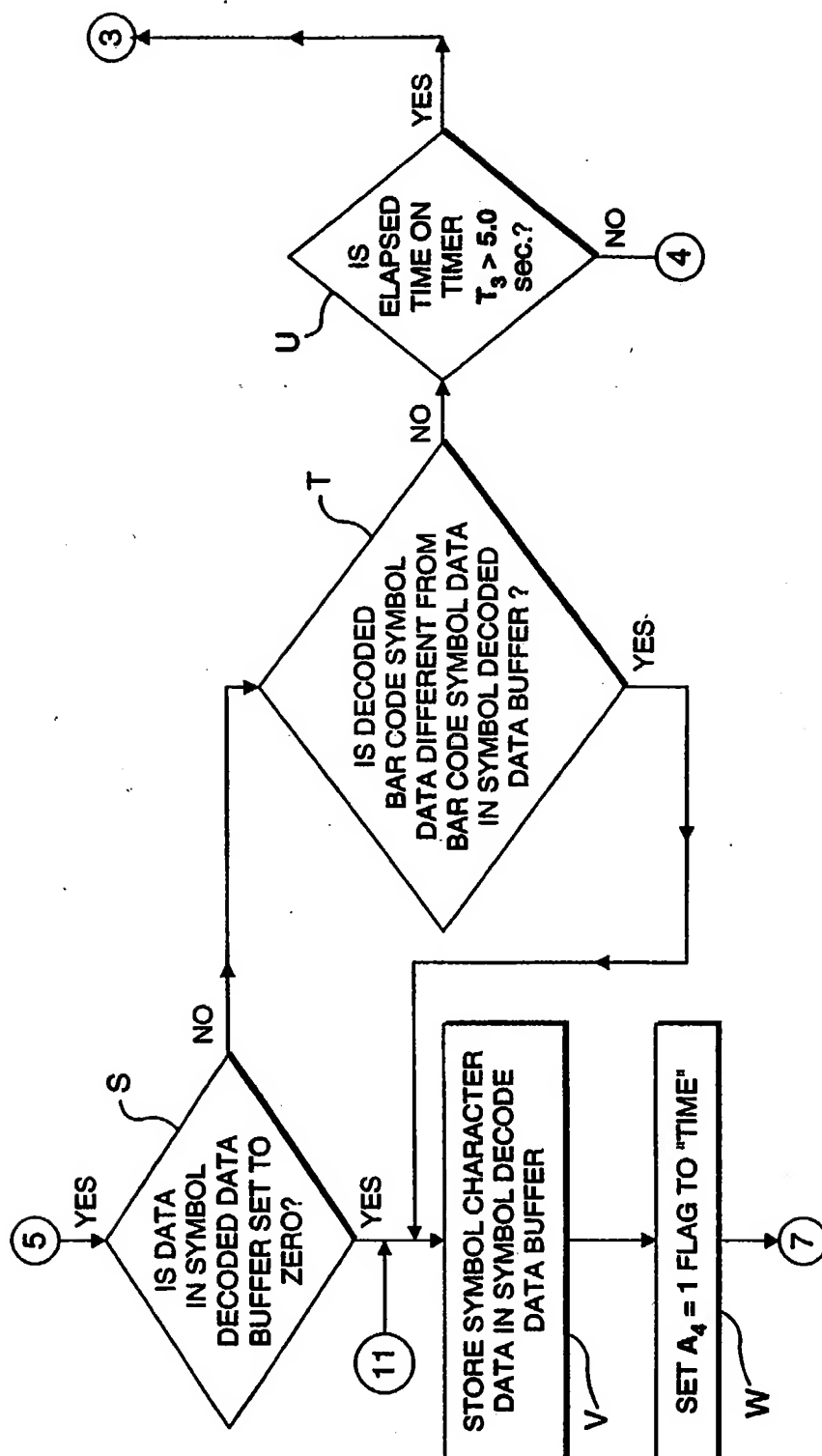


FIG. 35C

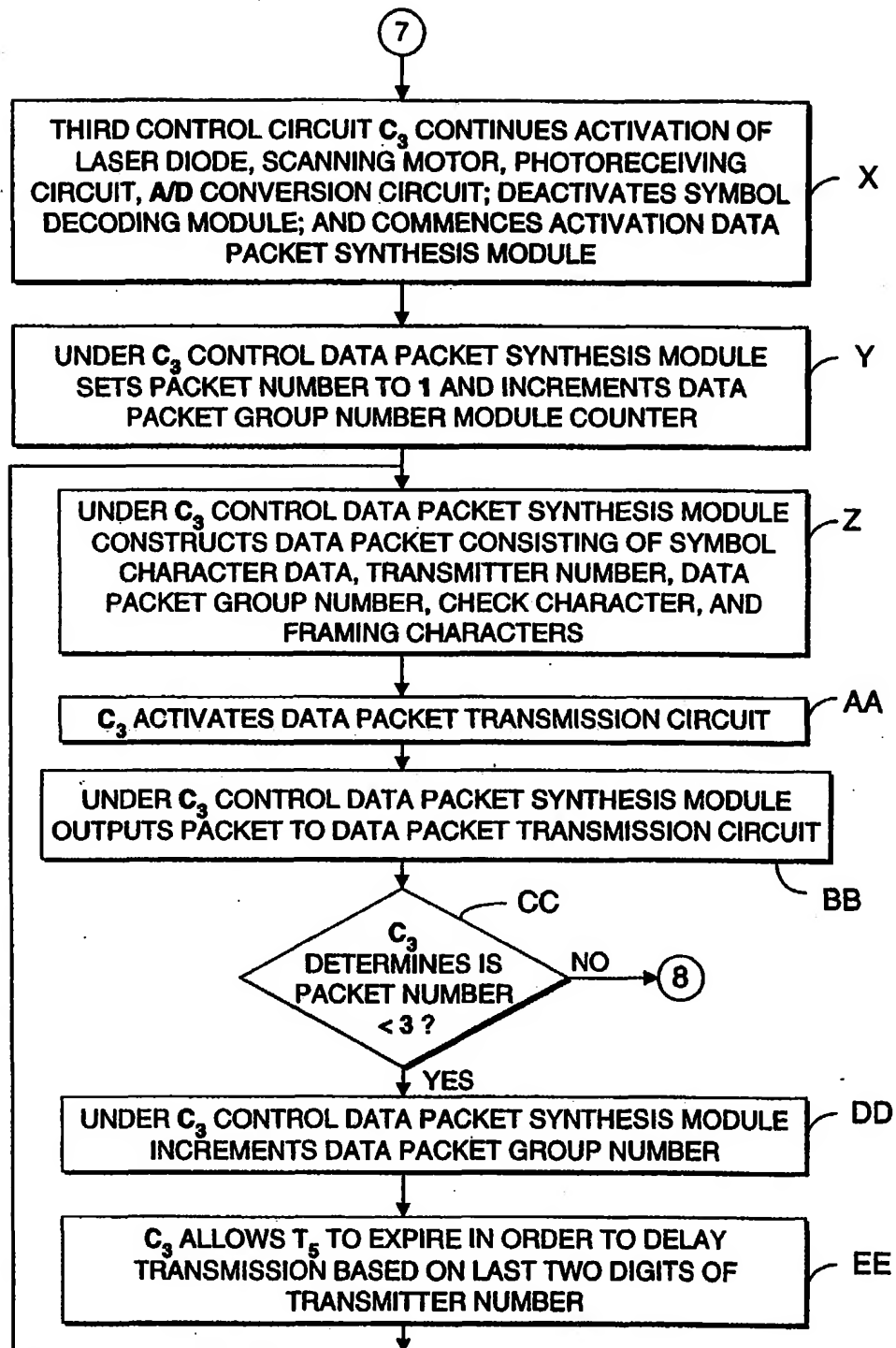


FIG. 35D

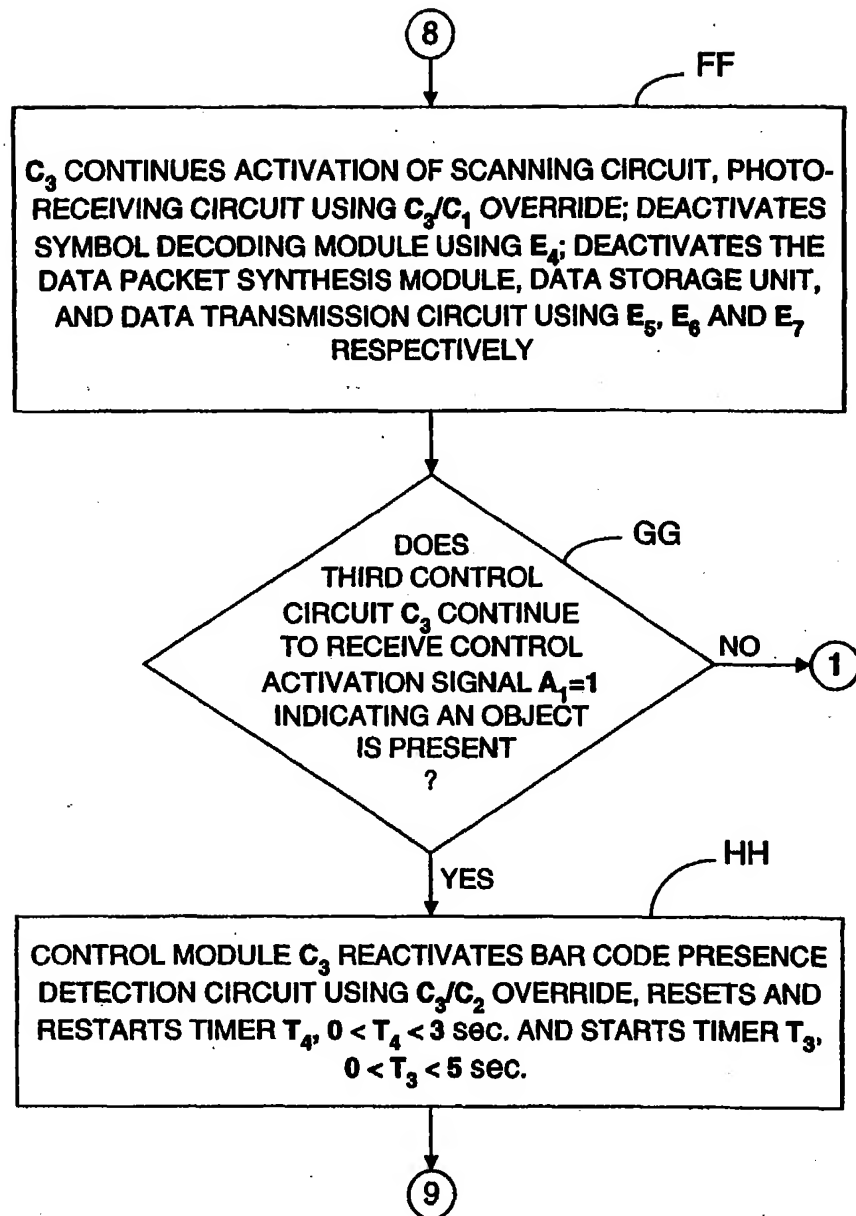


FIG. 35E

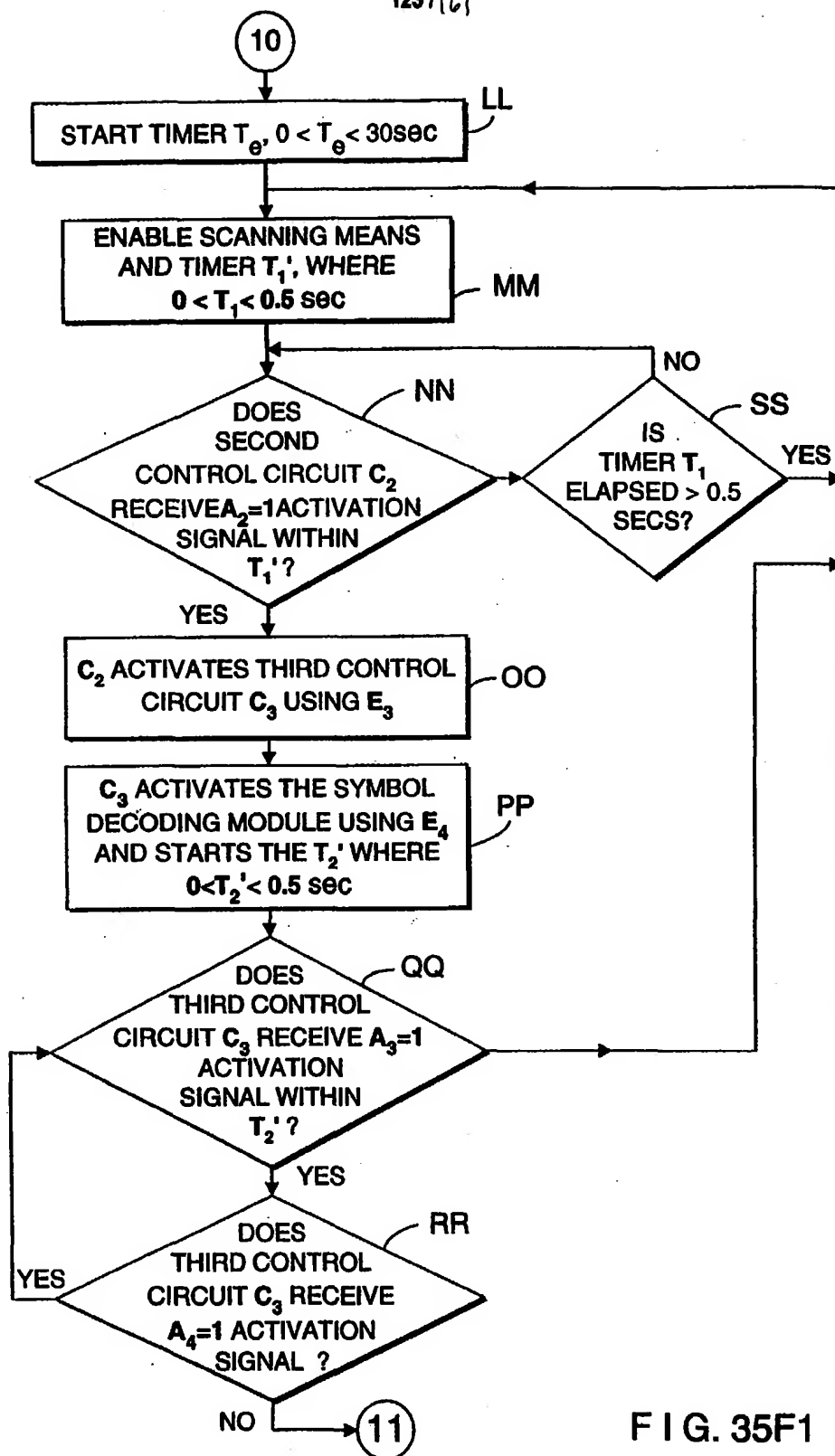
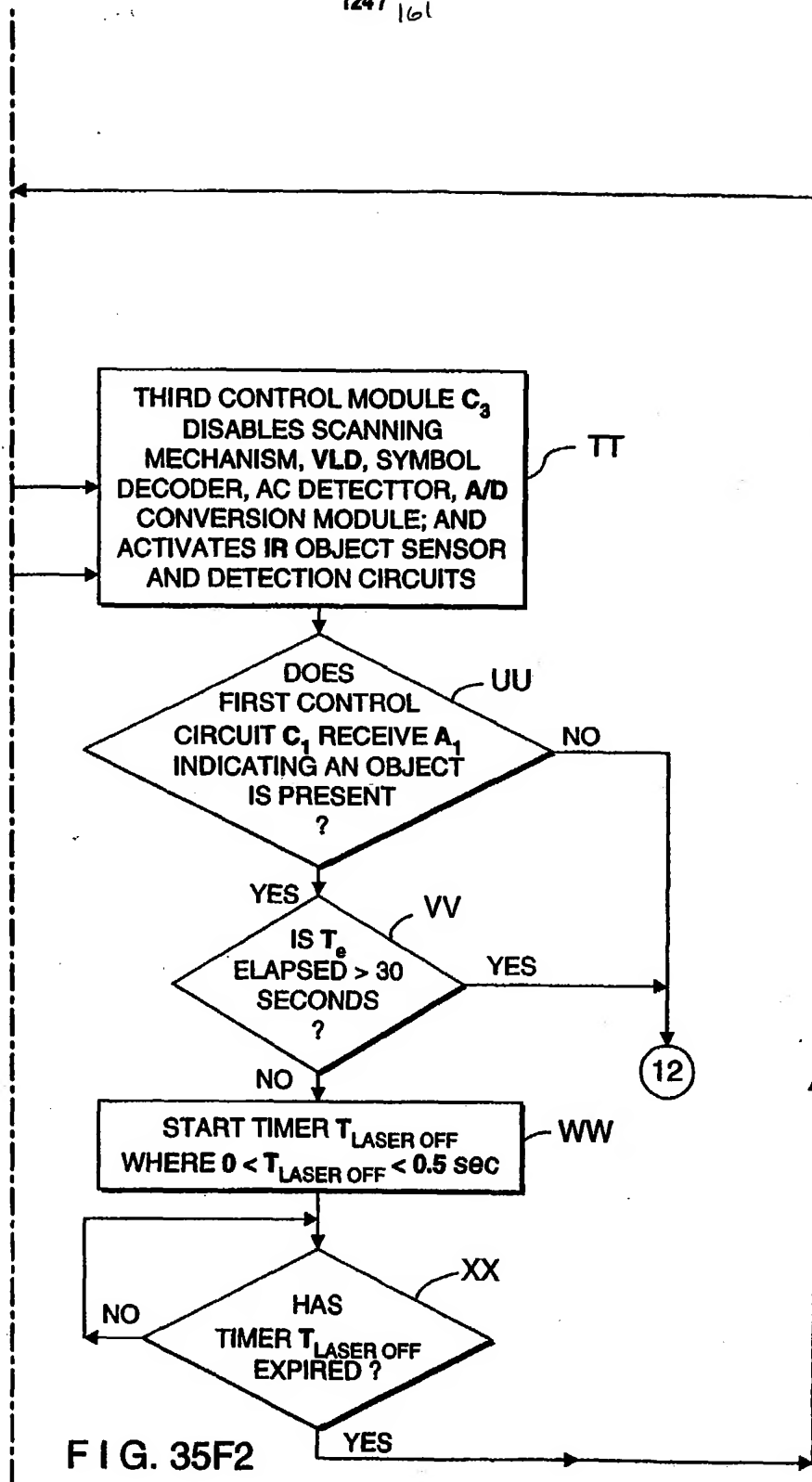
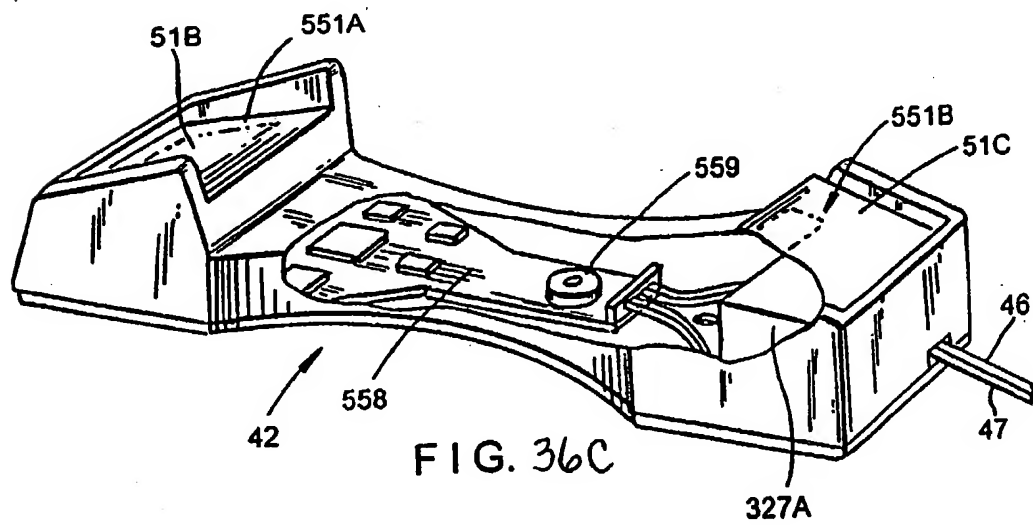
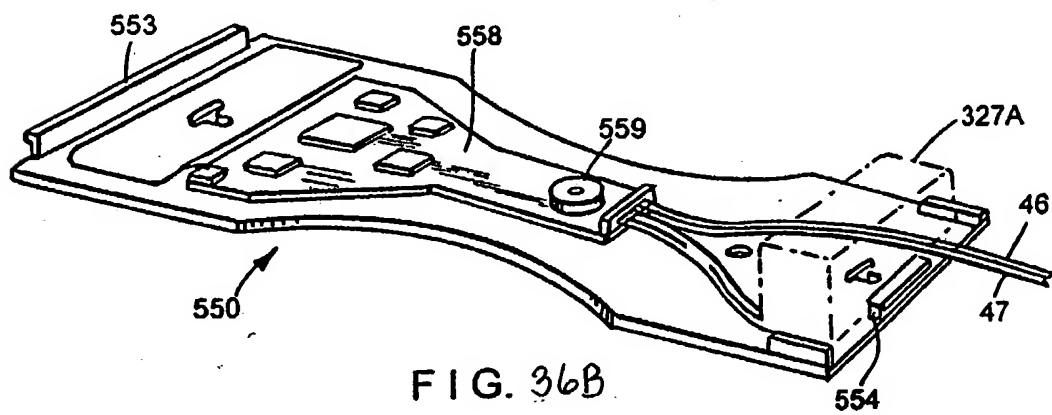
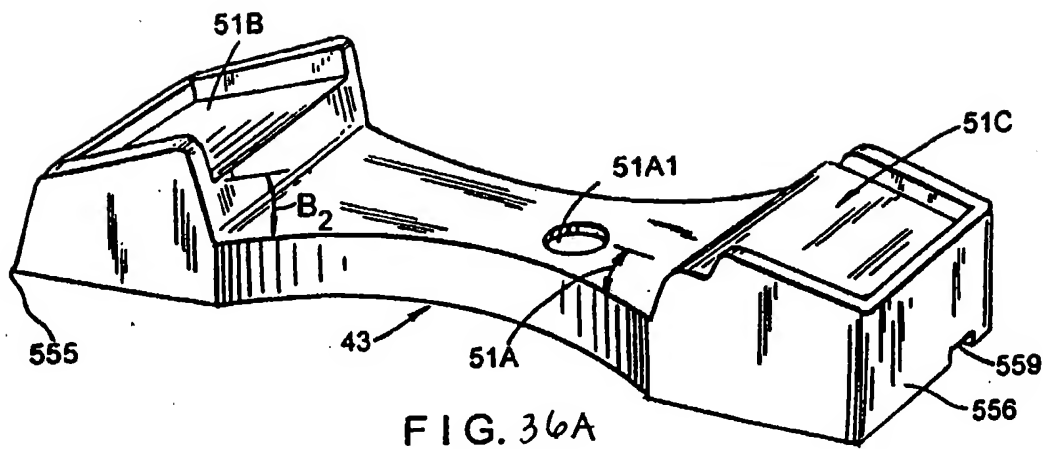


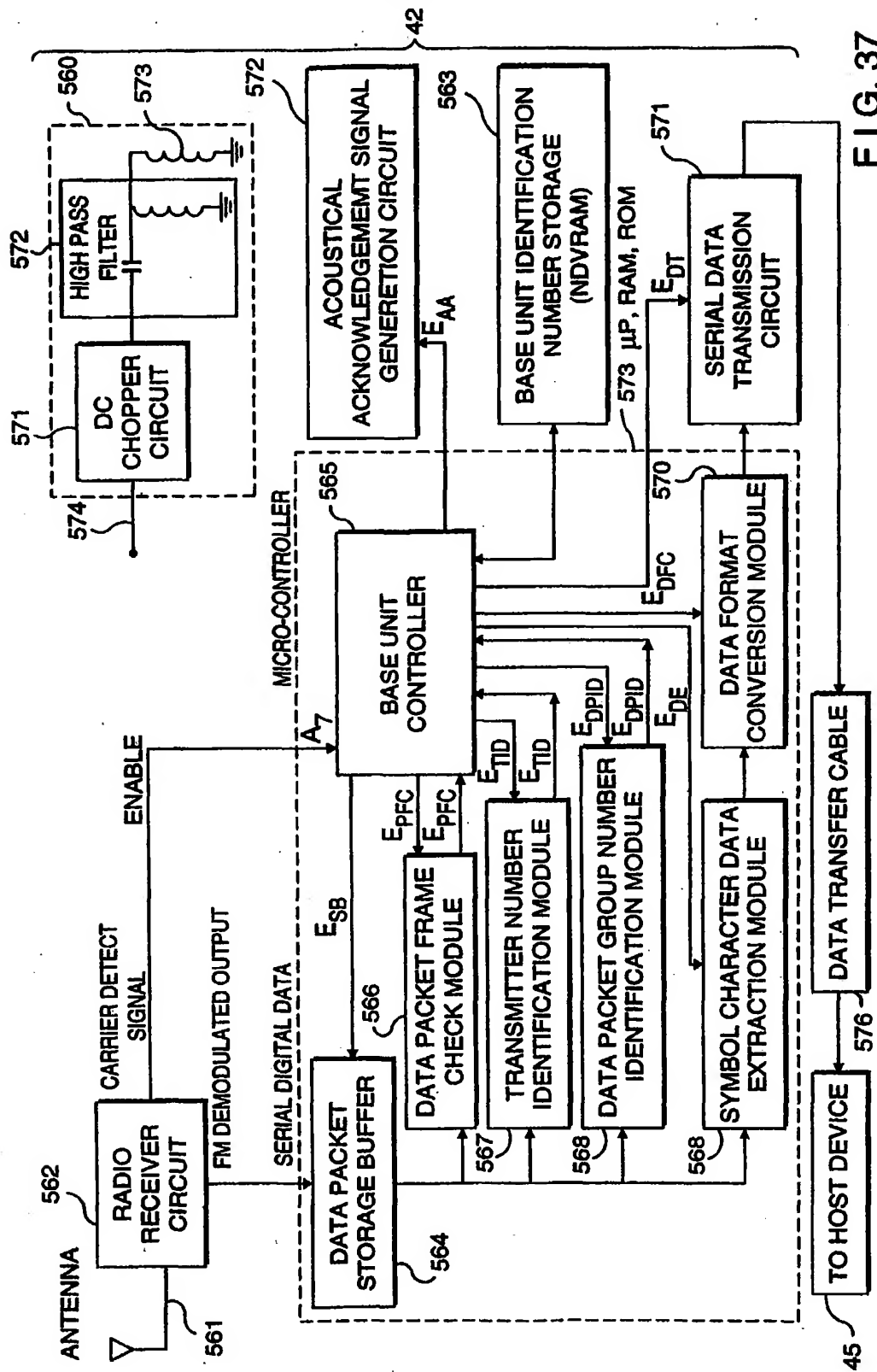
FIG. 35F1



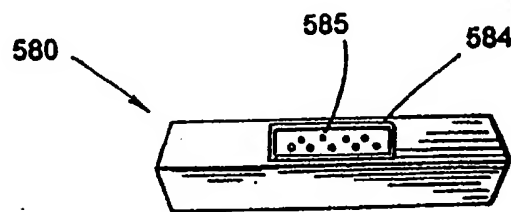
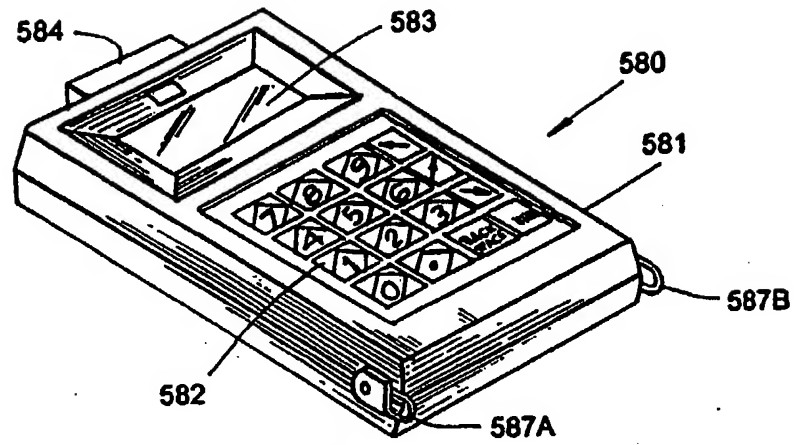


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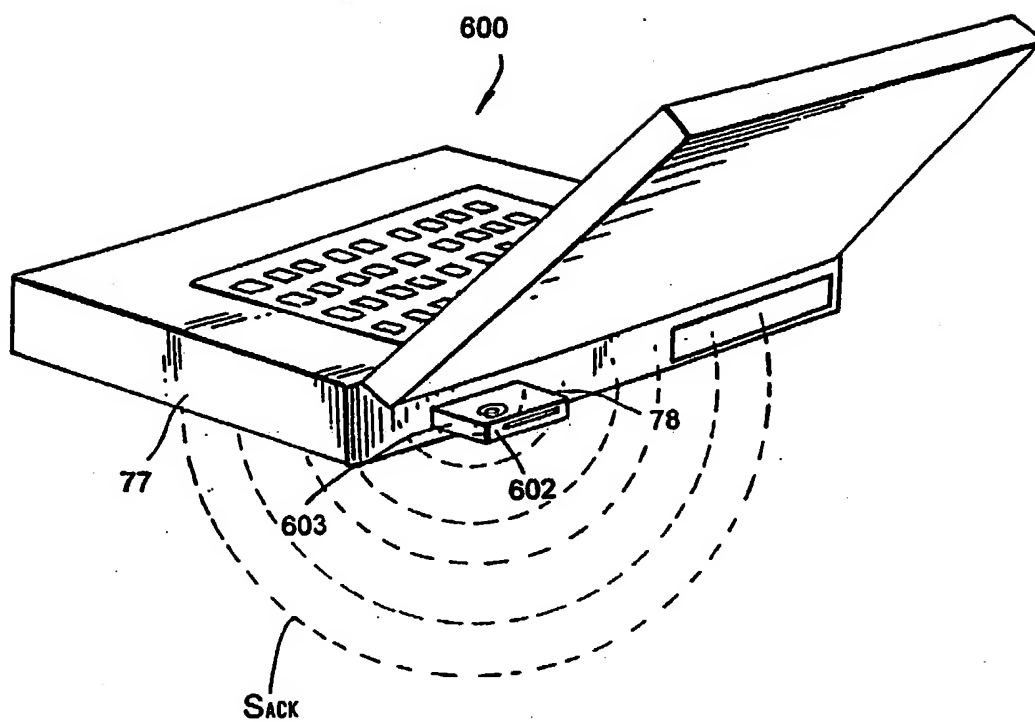
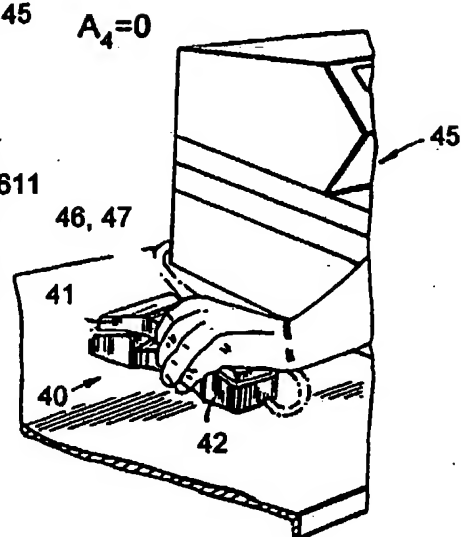
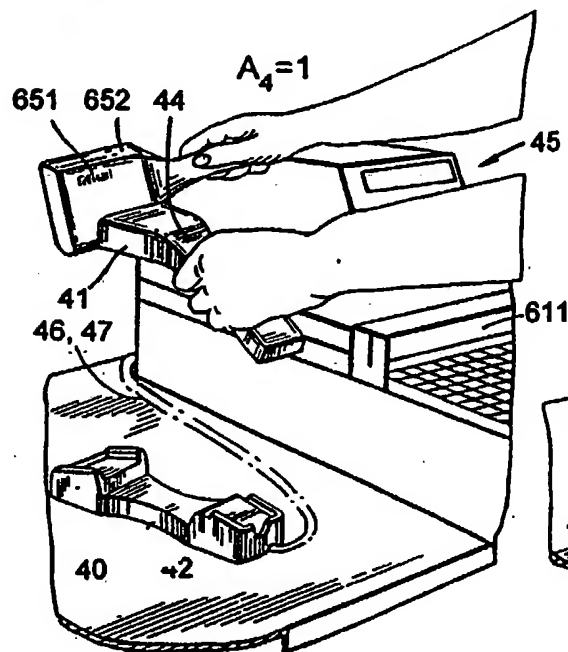
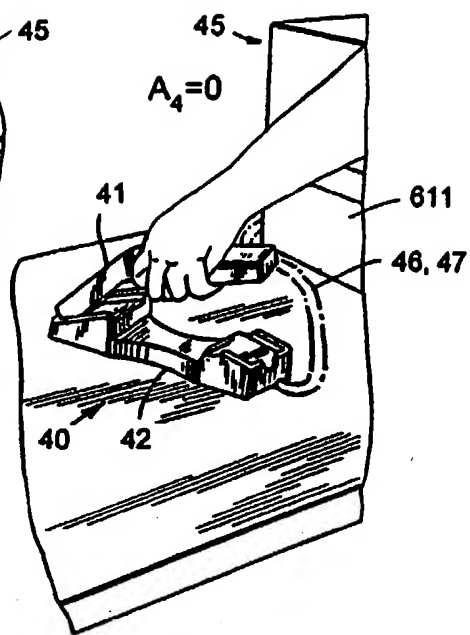
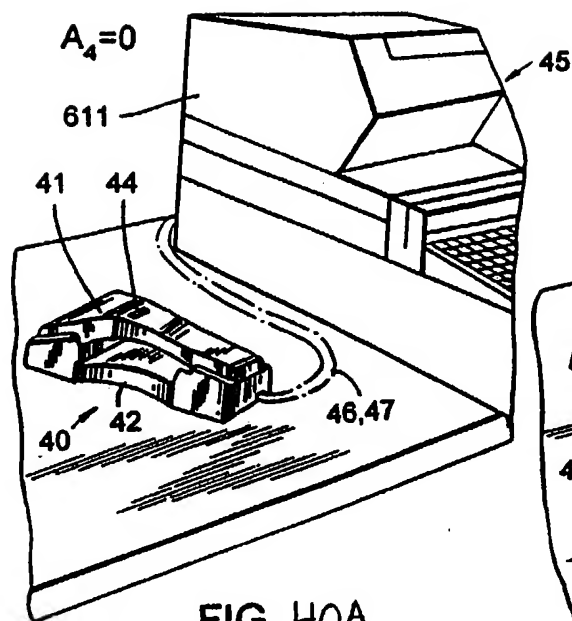


FIG. 39



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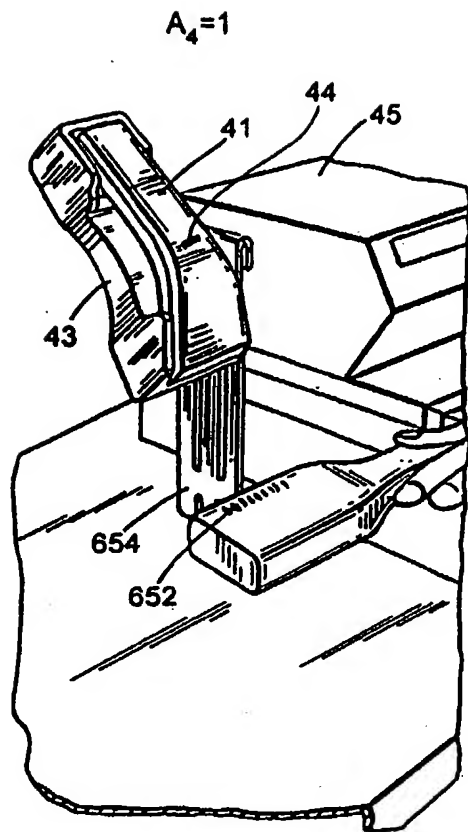


FIG. 41A

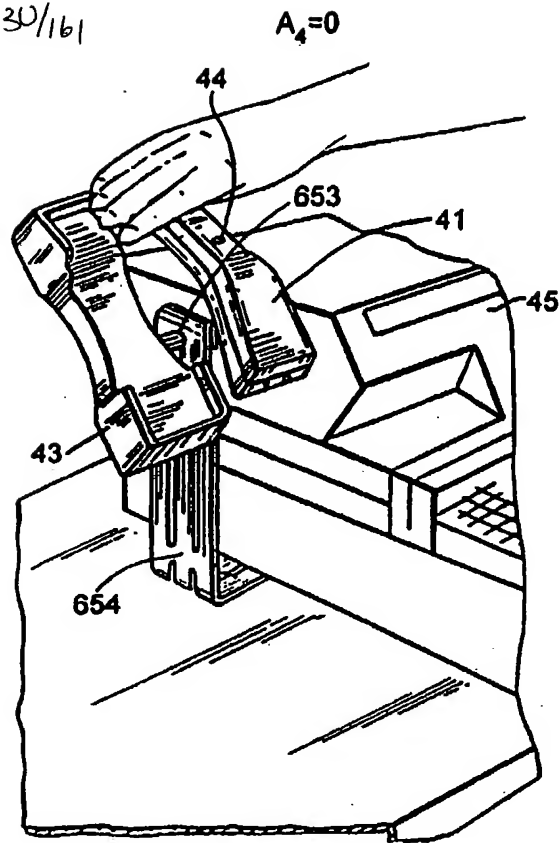


FIG. 41B

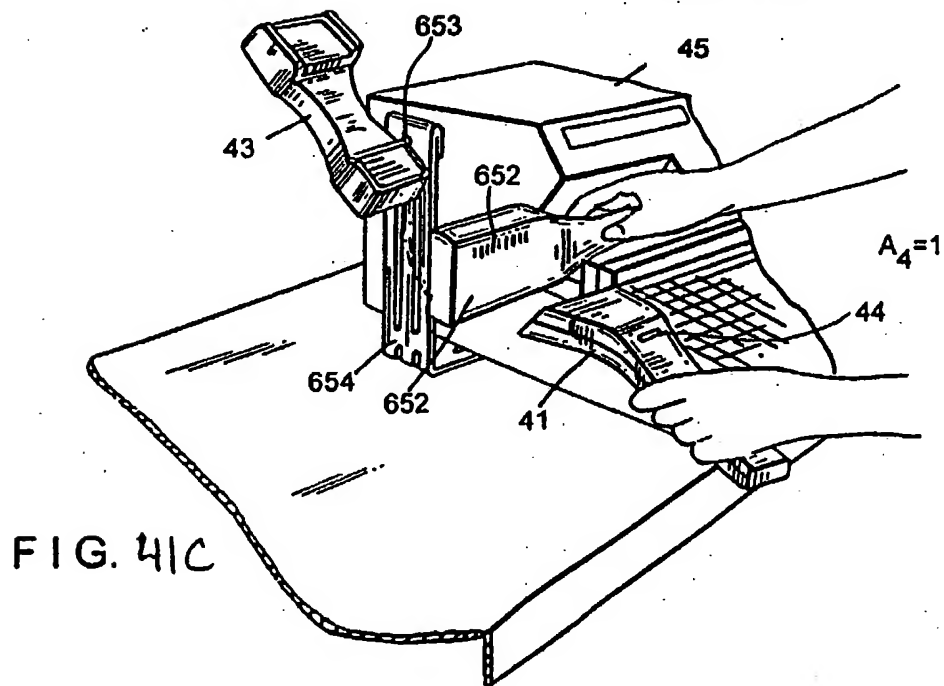


FIG. 41C

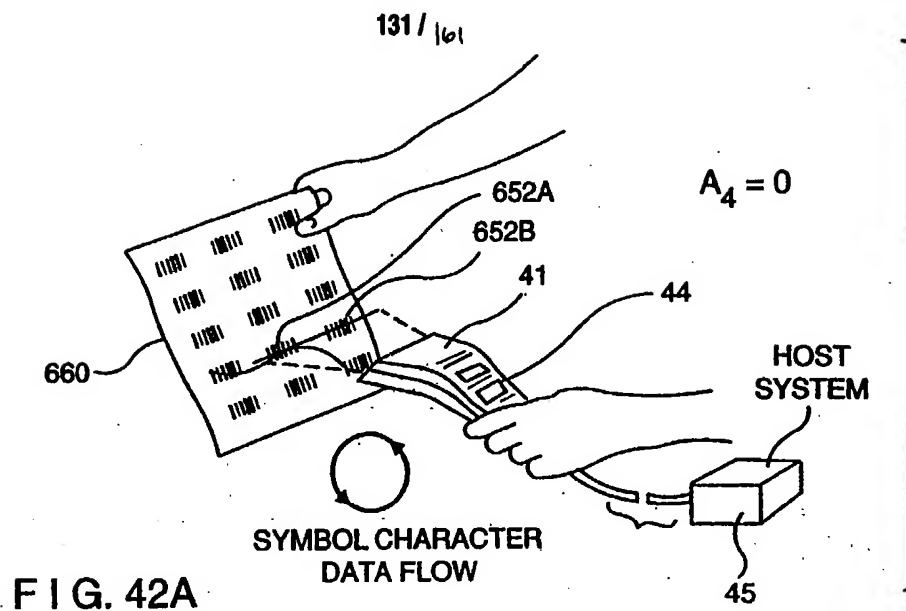


FIG. 42A

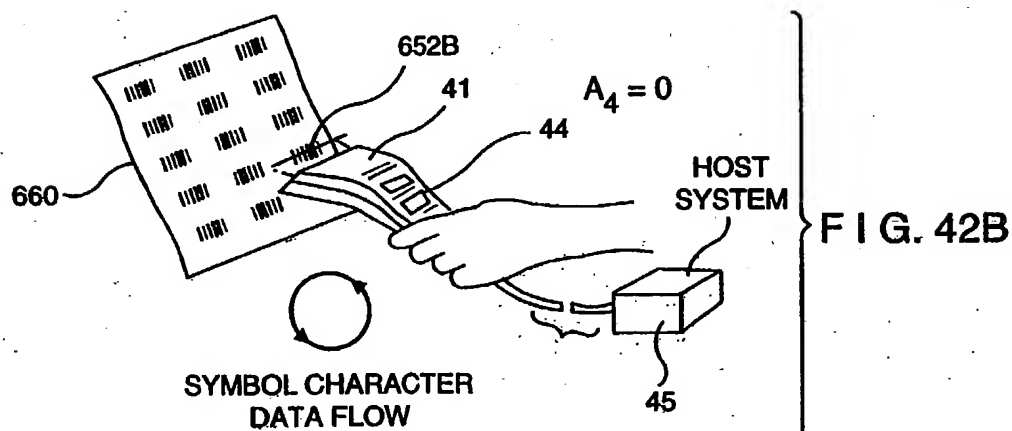


FIG. 42B

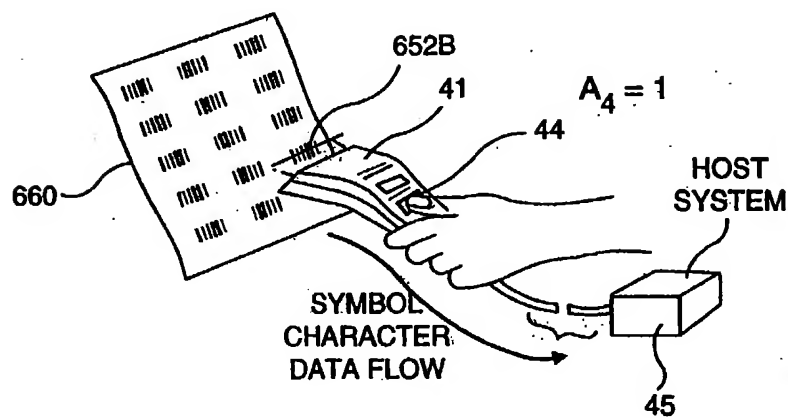
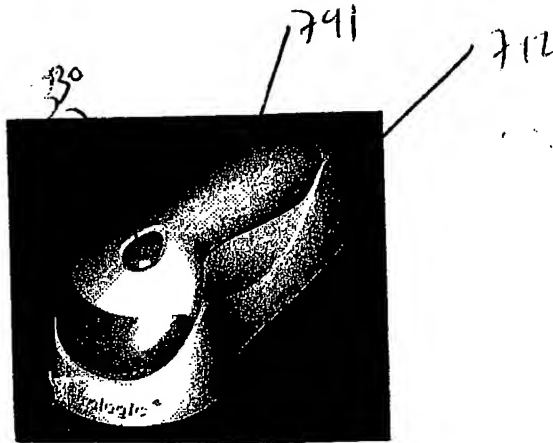


FIG. 42C

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790  
↓



Automatic Barcode  
Reading  
System with

2-WAY  
RF Communication  
Link

FIG. 43A



712 FIG. 43B

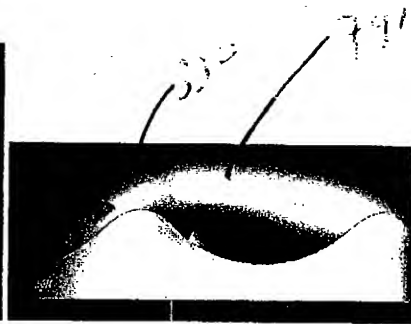
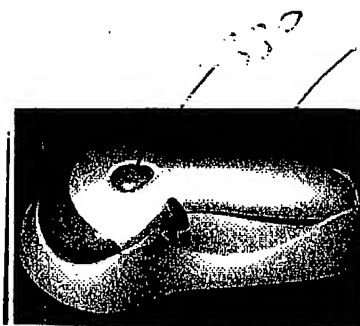


FIG. 43C

792



792

FIG. 43D



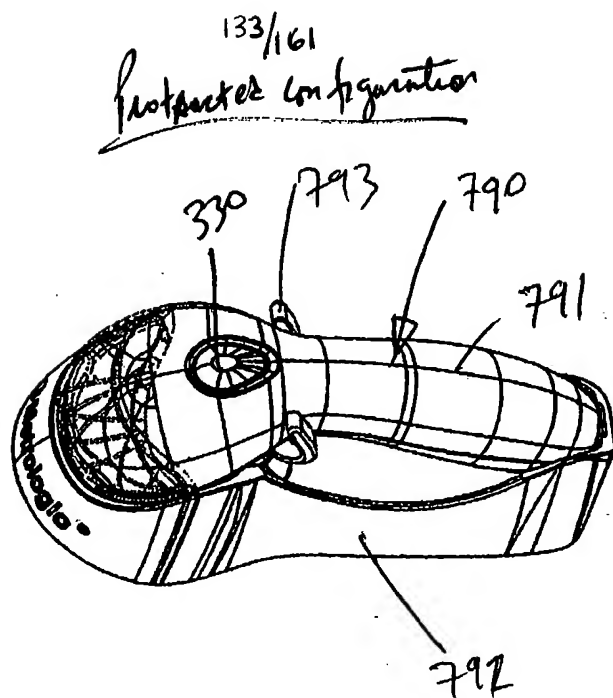


FIG. 43F

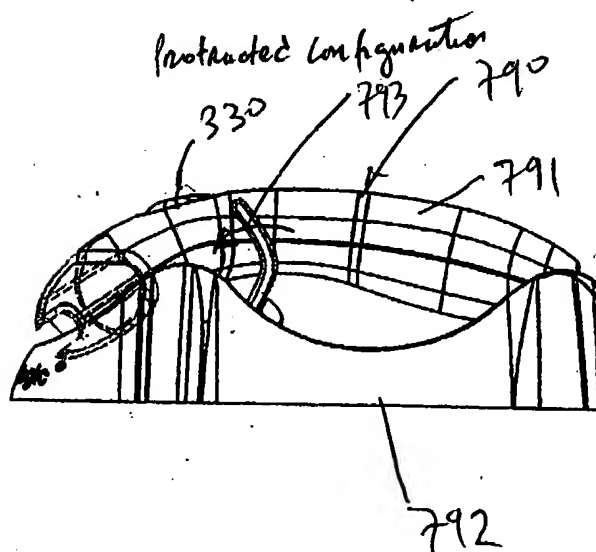


FIG. 43E

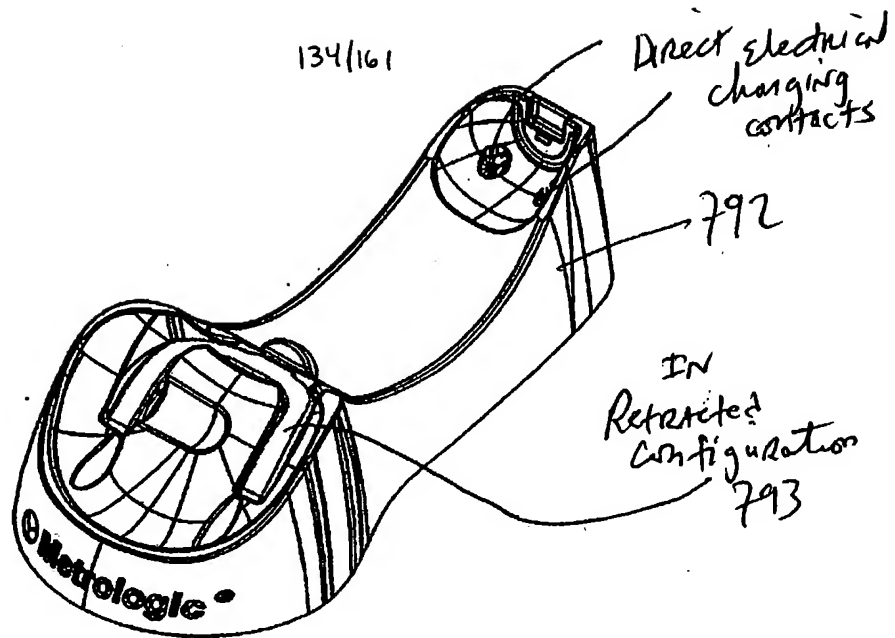


FIG. 43G

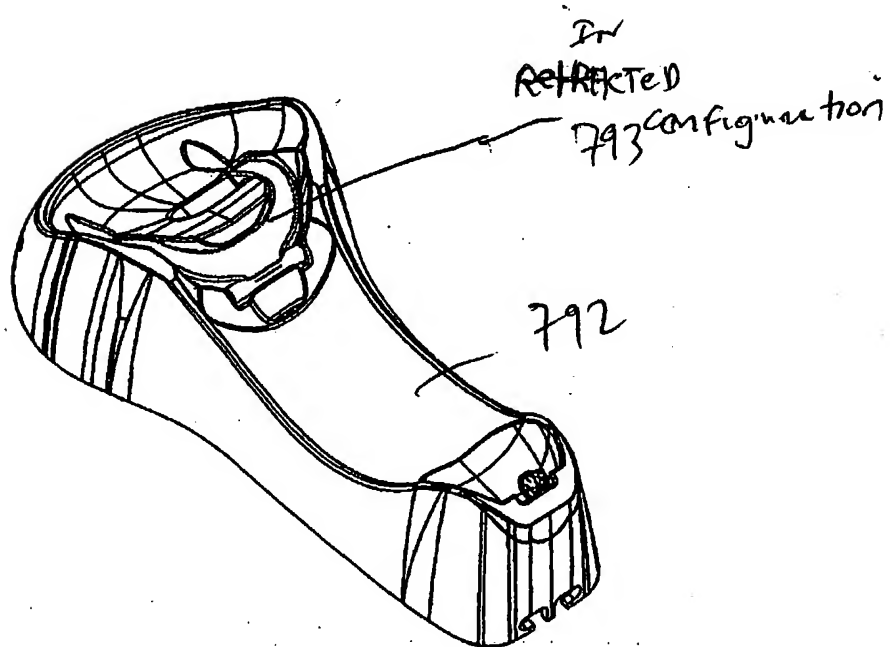


FIG. 43A

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Reflected Configuration  
793

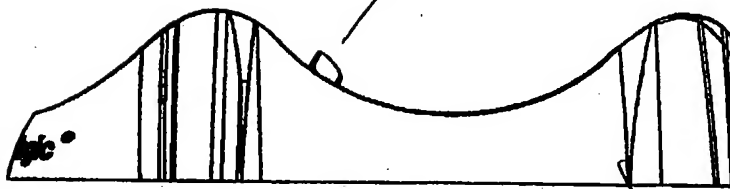


FIG. 43 I 792

Projected Configuration  
793

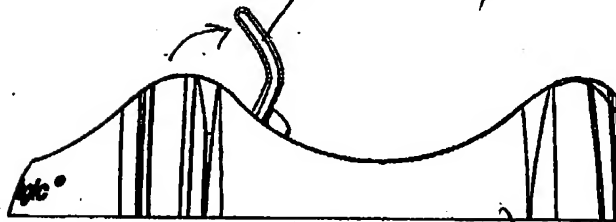


FIG. 43 J 792

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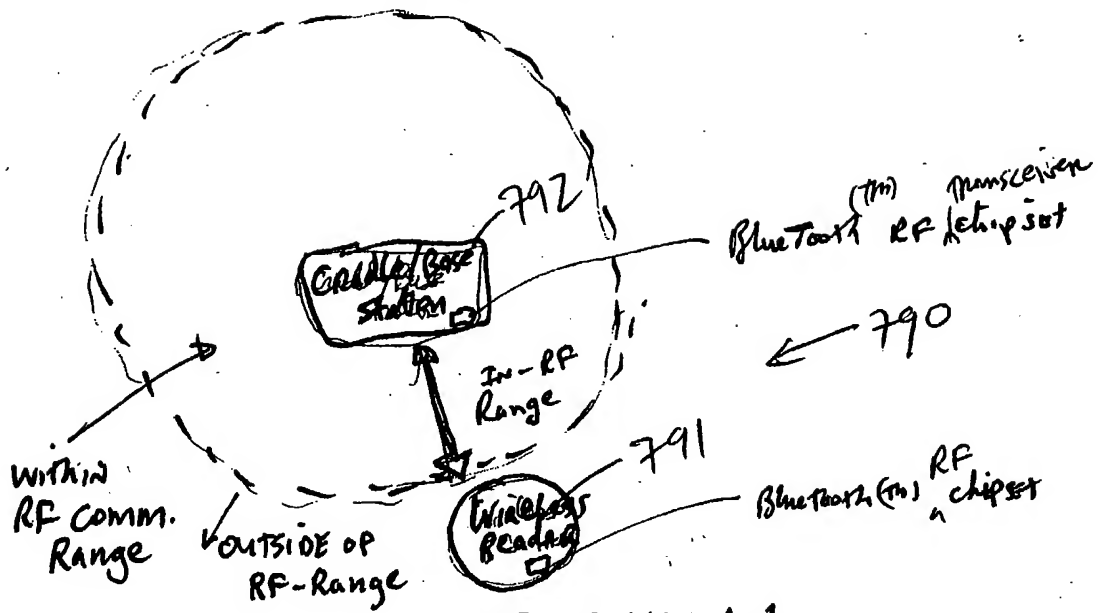


FIG. 44A1

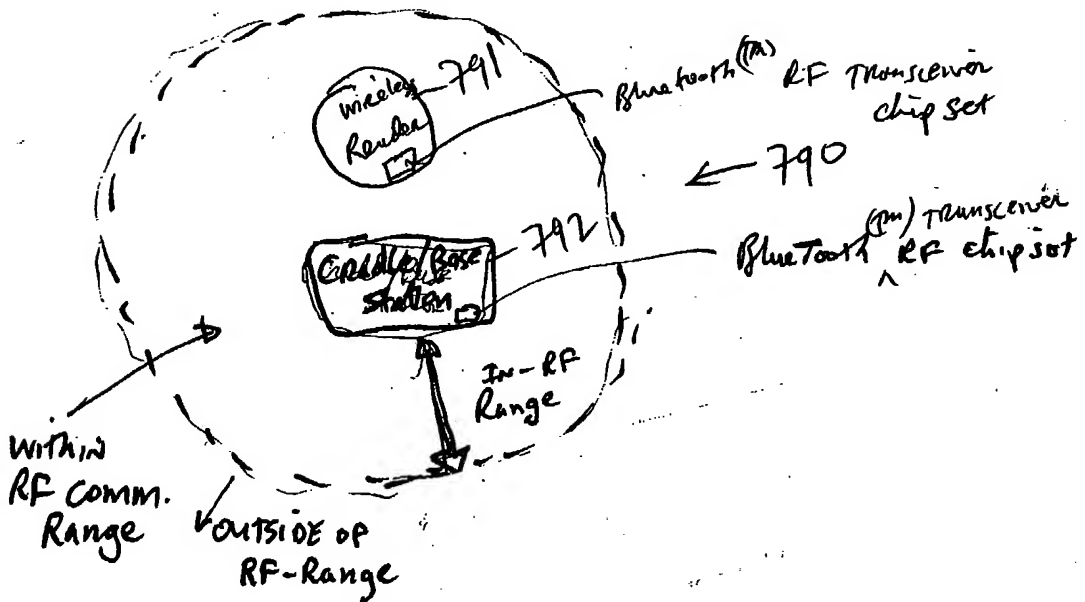
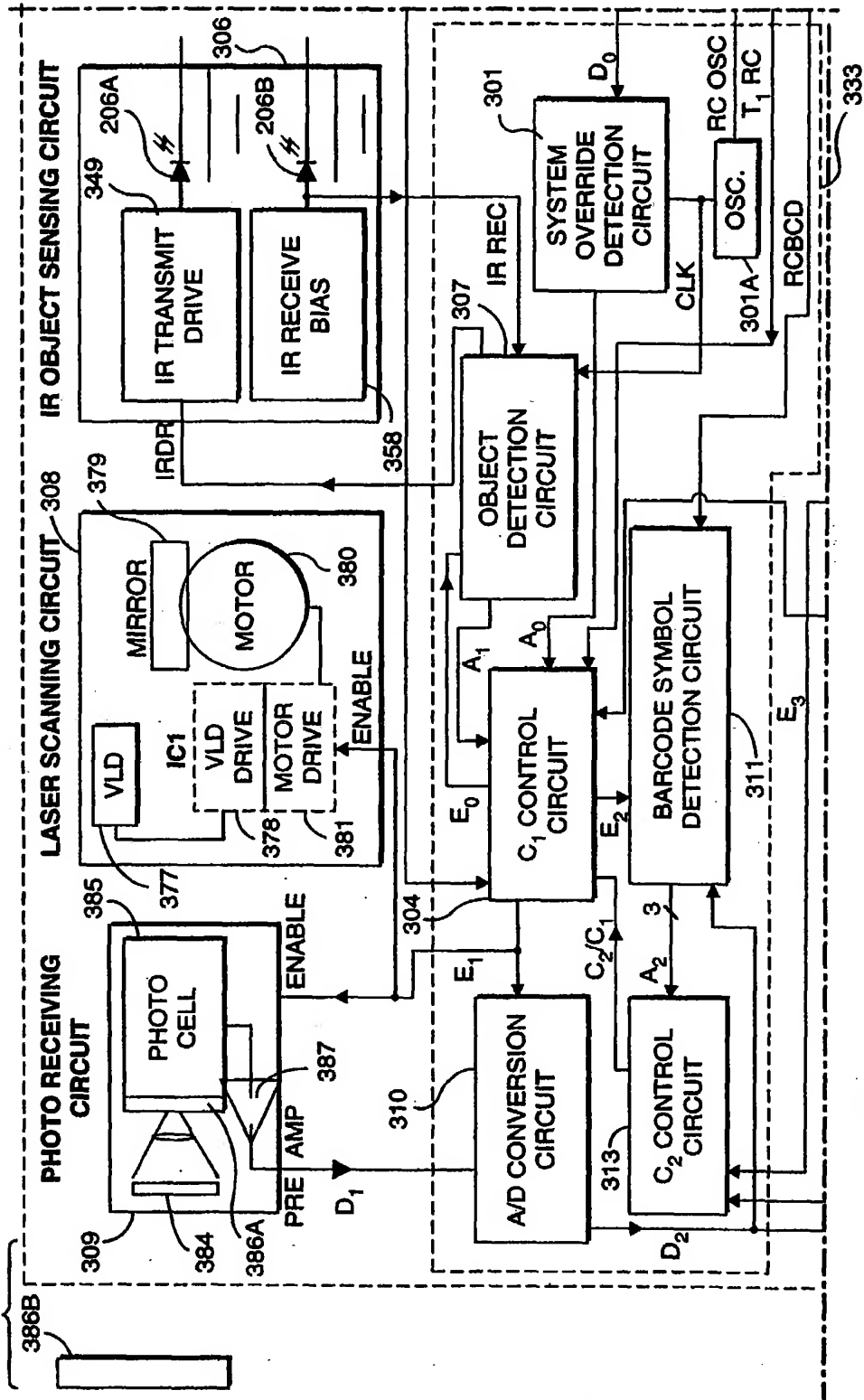


FIG. 44A2

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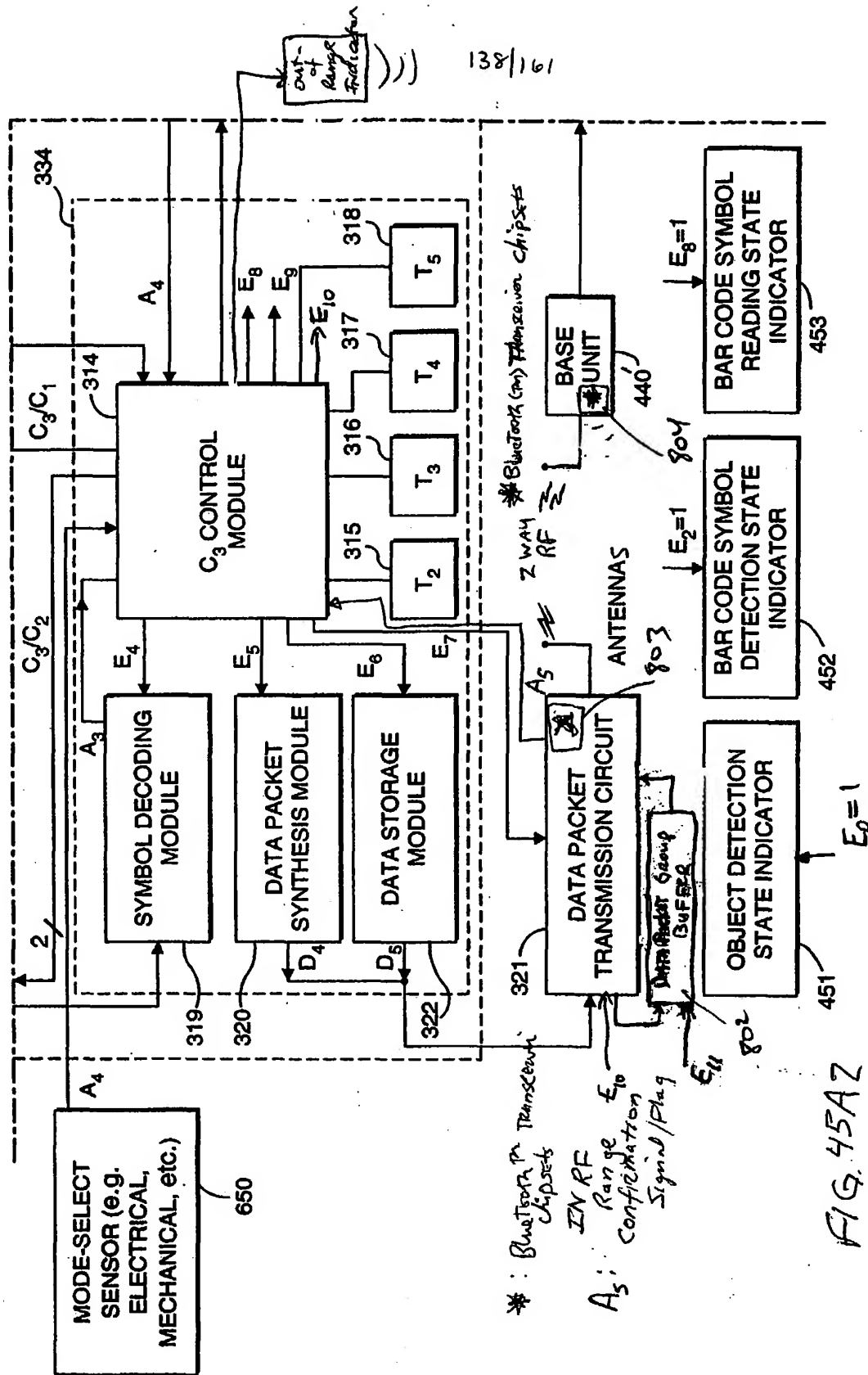
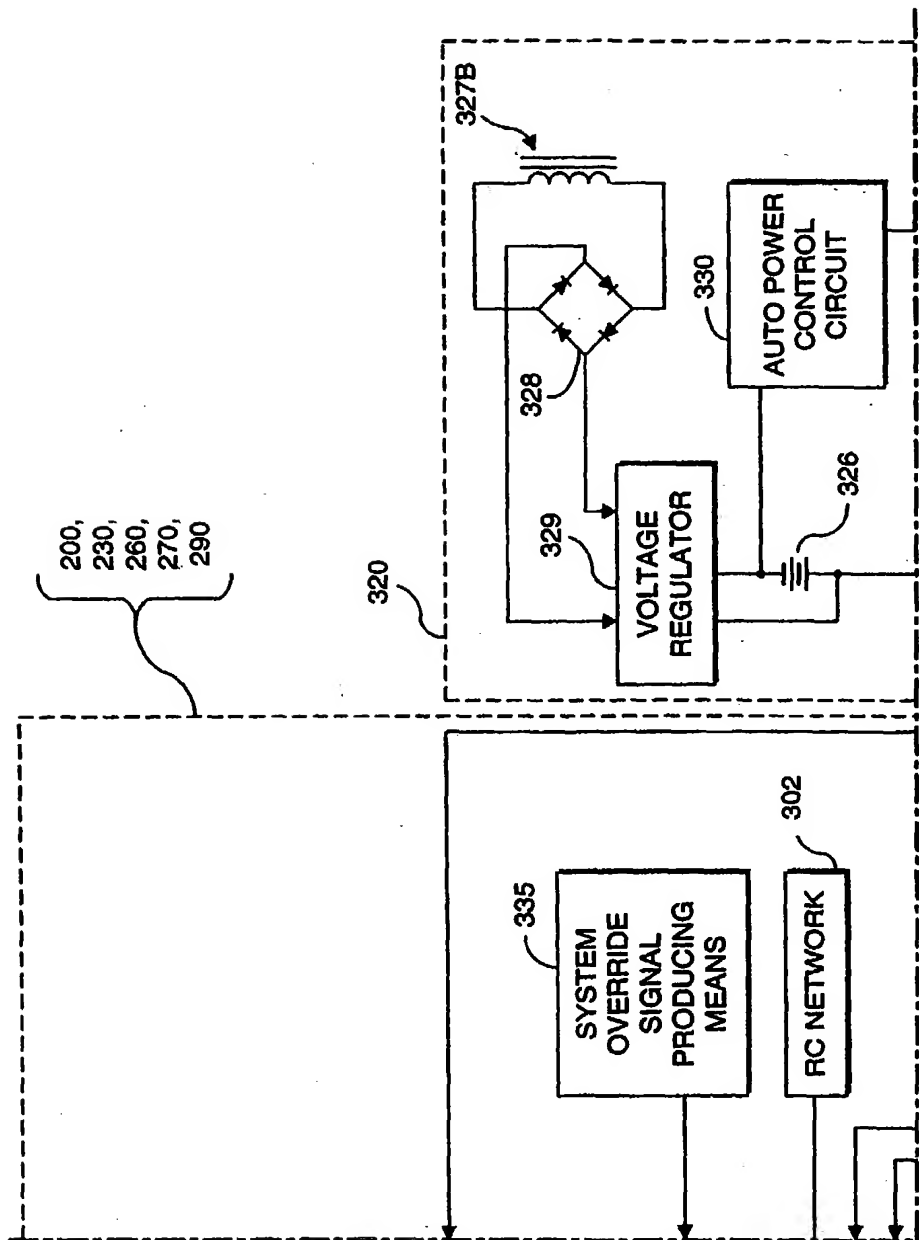


FIG. 45A



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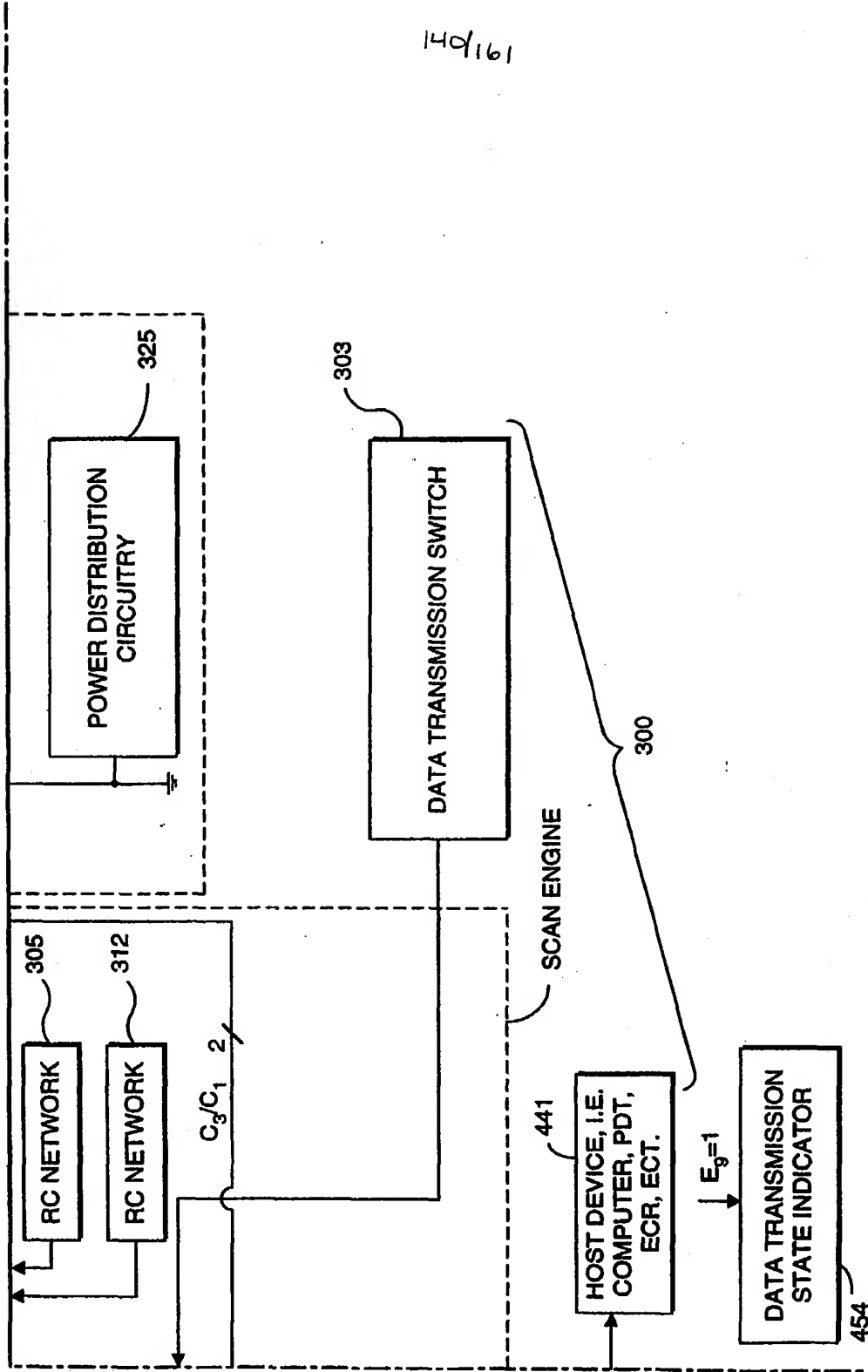


FIG. 45A4



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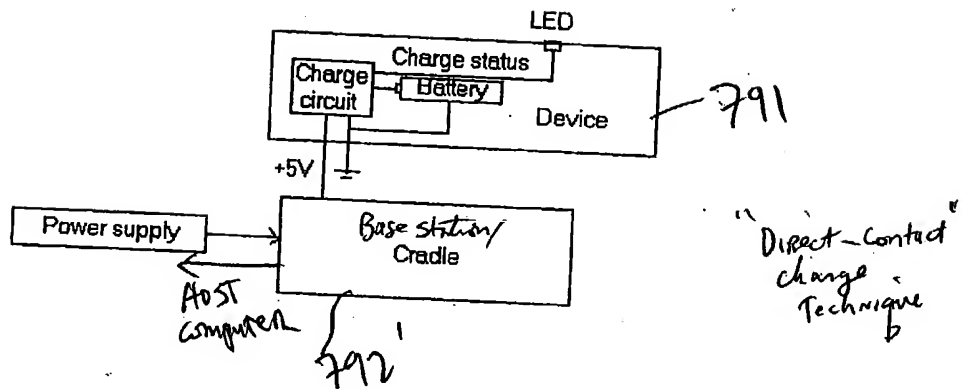


FIG. 45B

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DATA Packet  
Transmission VIA  
2-WAY RF WITH Automatic  
RF-Range Dependent  
Control

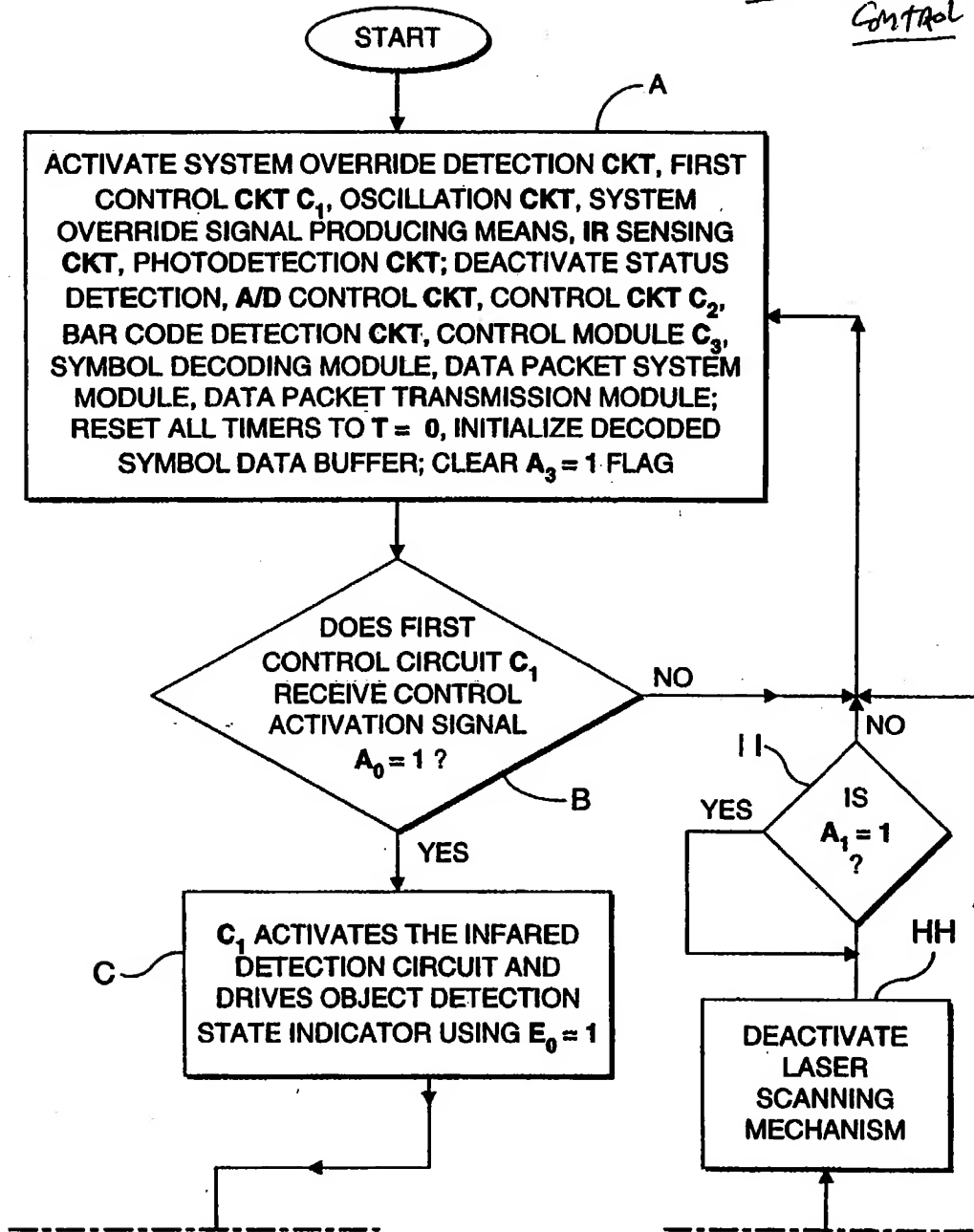
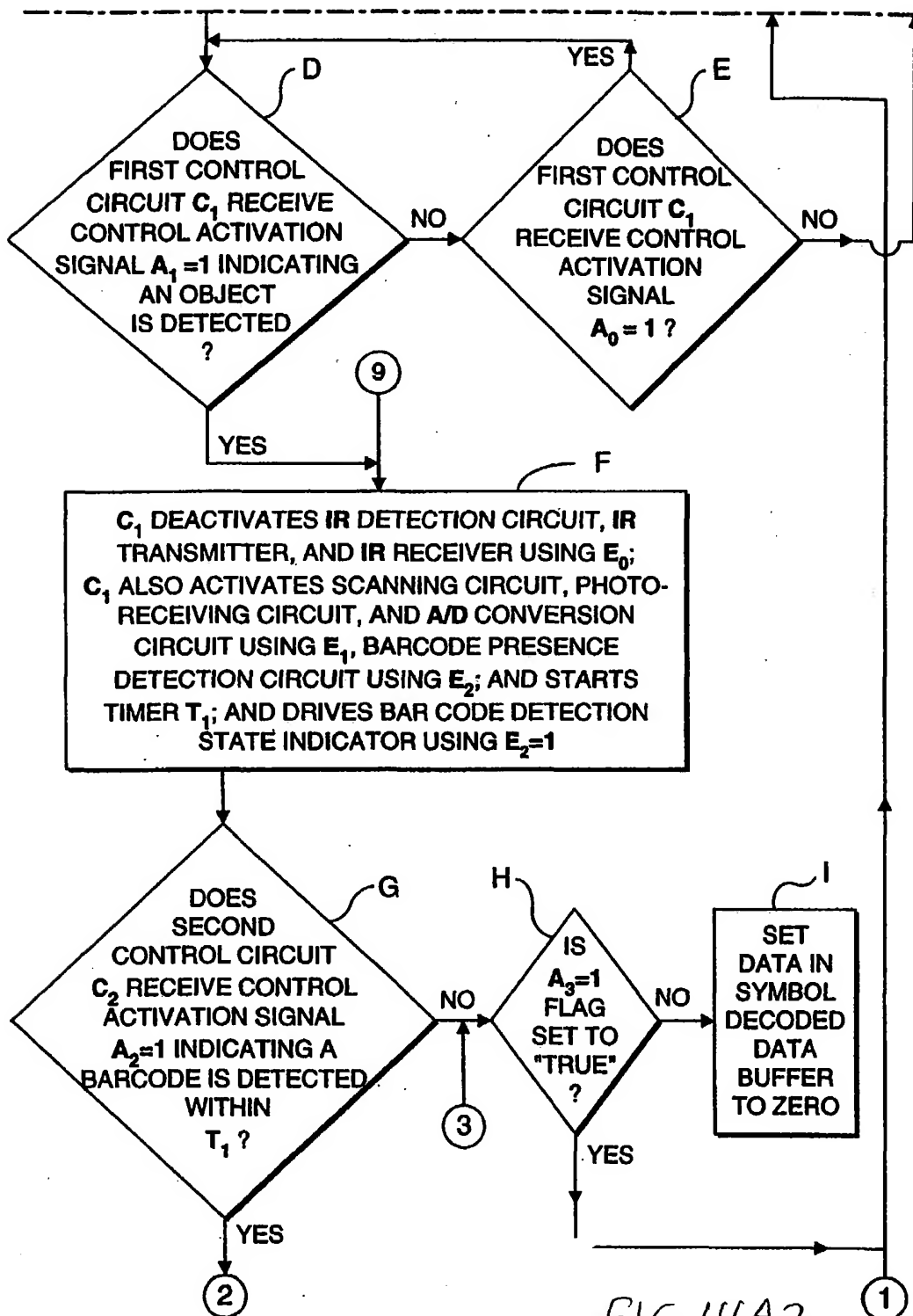
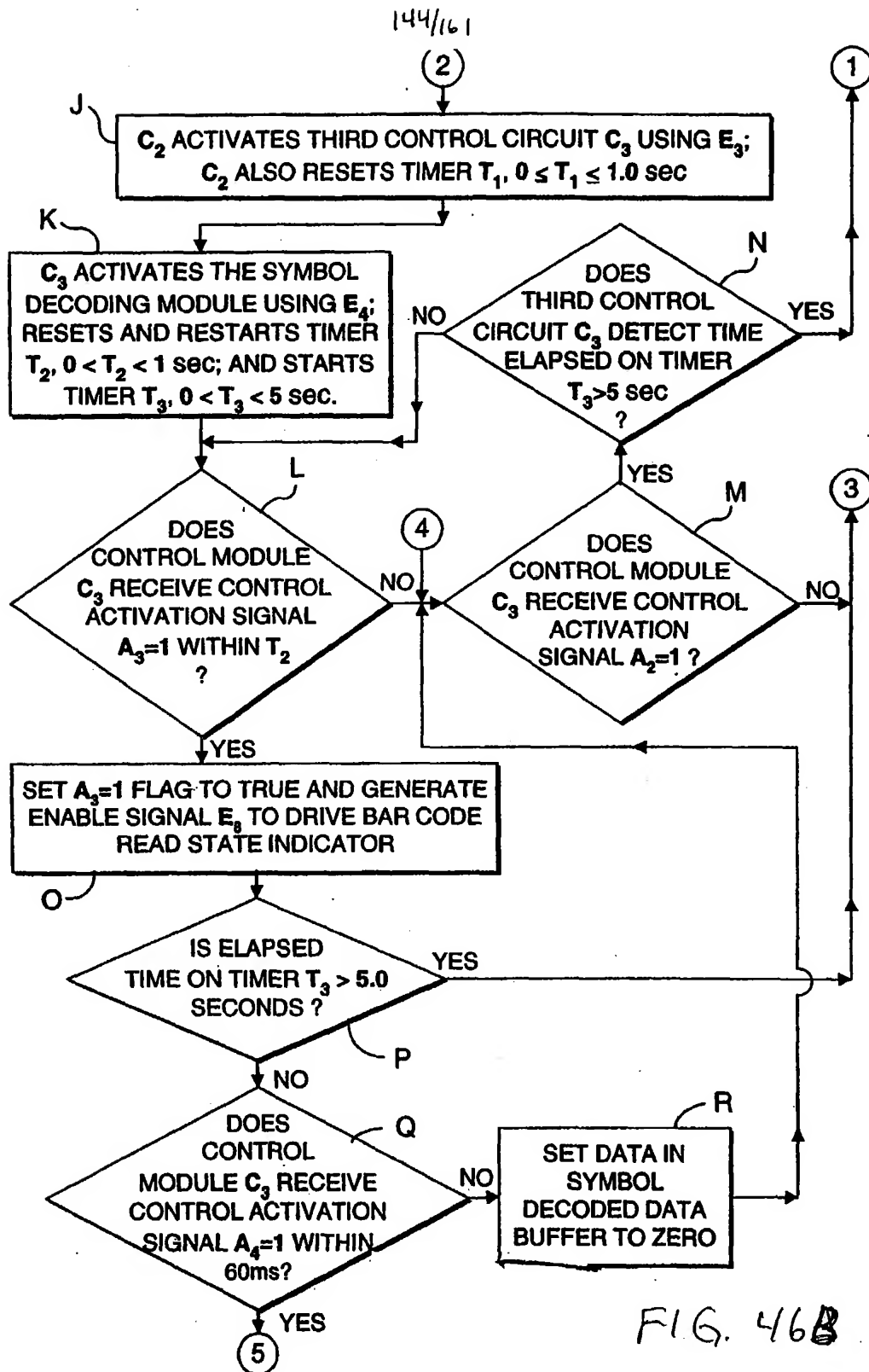


FIG. 46A1





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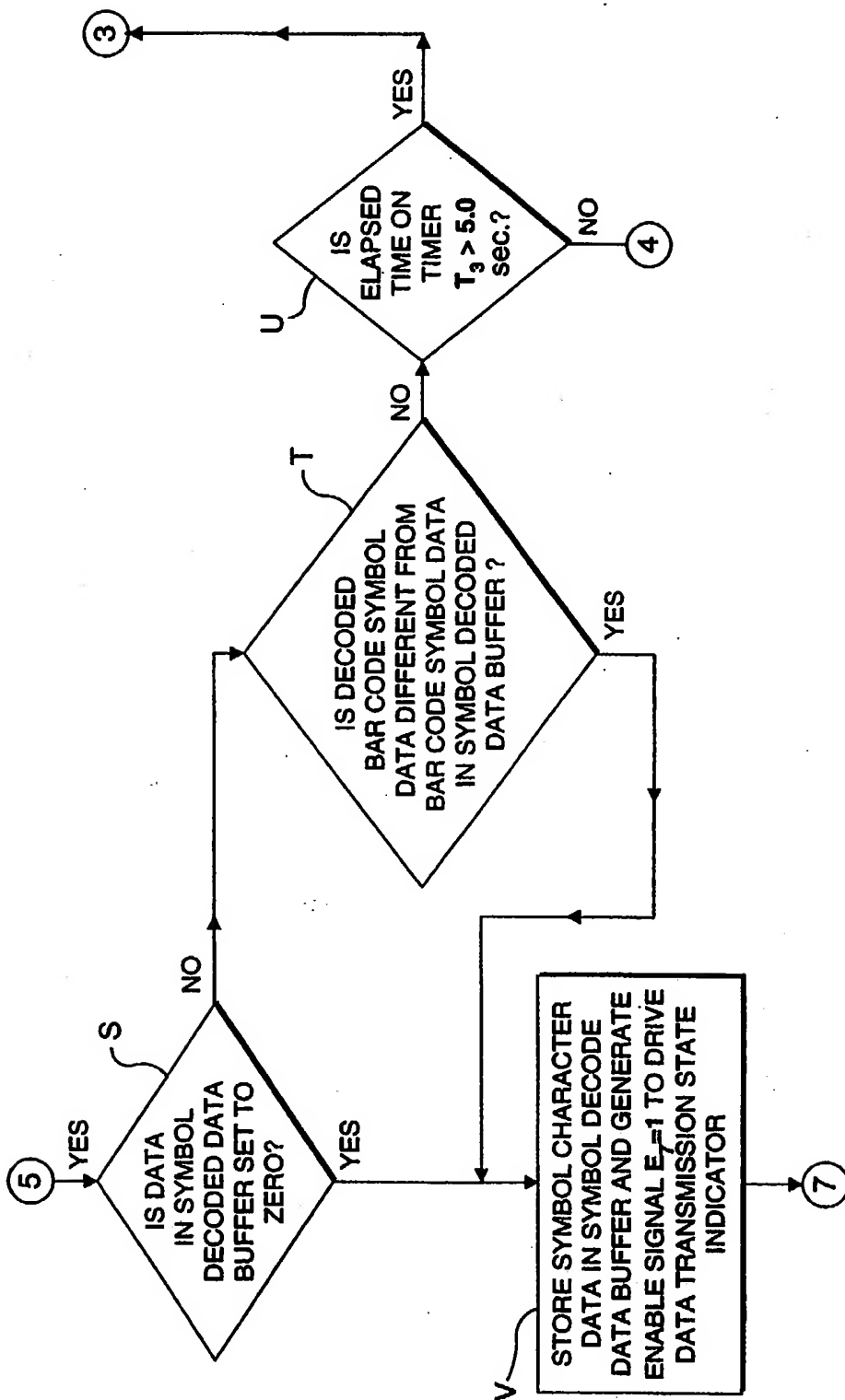


FIG 46C1

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7

THIRD CONTROL CIRCUIT  $C_3$  CONTINUES ACTIVATION OF LASER DIODE, SCANNING MOTOR, PHOTORECEIVING CIRCUIT, A/D CONVERSION CIRCUIT; DEACTIVATES SYMBOL DECODING MODULE; AND COMMENCES ACTIVATION DATA PACKET SYNTHESIS MODULE

W

UNDER  $C_3$  CONTROL, DATA PACKET SYNTHESIS MODULE CONSTRUCTS DATA PACKET CONSISTING OF SYMBOL CHARACTER DATA, TRANSMITTER NUMBER, DATA PACKET GROUP NUMBER, CHECK CHARACTER AND FRAMING CHARACTERS

X

IS IN-RF RANGE CONFIRMATION SIGNAL  $A_5=1$ ?

NO

YES

NO

ARE DATA PACKET GROUP(S) STORED IN DATA PACKET GROUP BUFFER?

YES

YES

$C_3$  CONTROL MODULE GENERATES ENABLE SIGNAL  $E_{11}=1$  RELOADING BUFFERED DATA PACKET GROUP(S) INTO DATA PACKET TRANSMISSION CIRCUIT

AA

CONTROL MODULE  $C_3$  GENERATES ENABLE SIGNAL  $E_{10}=1$  LOADING CURRENTLY SYNTHESIZED DATA PACKET GROUP INTO DATA PACKET TRANSMISSION CIRCUIT

BB

11

FIG. 46C2

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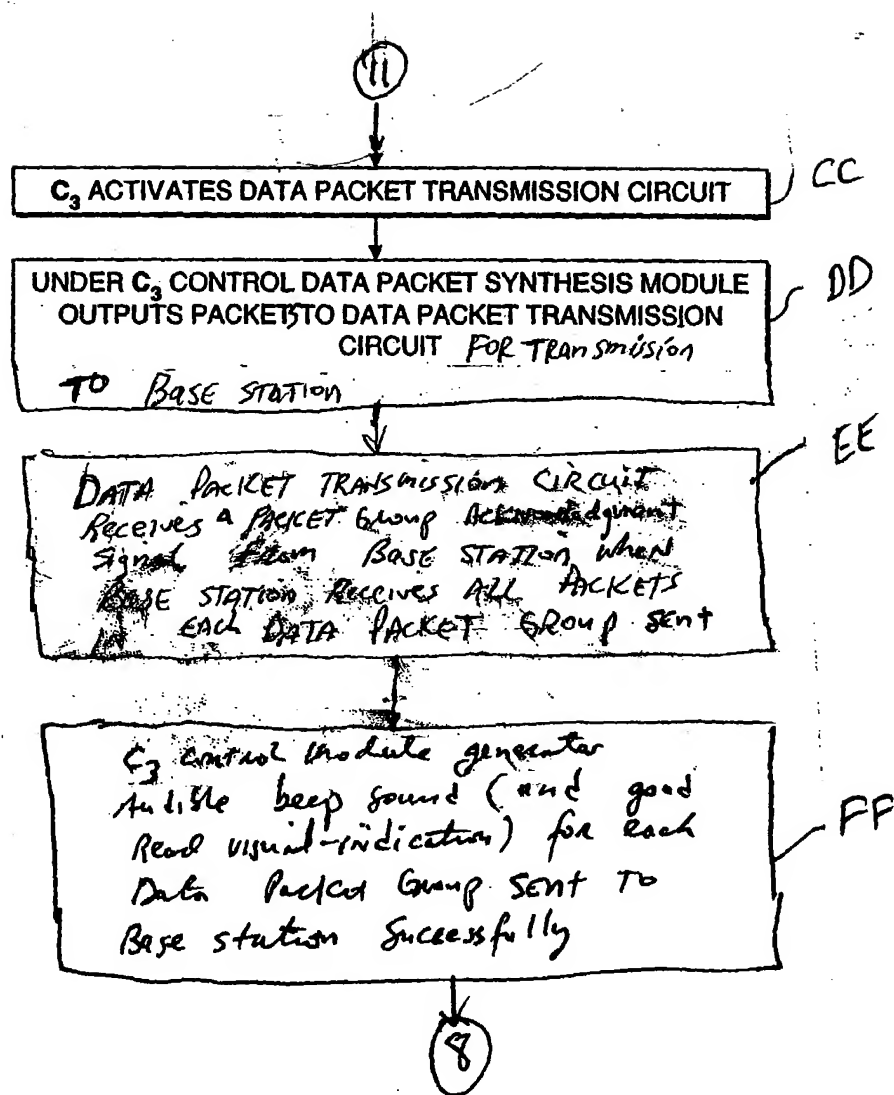


FIG. 46C3

1481161

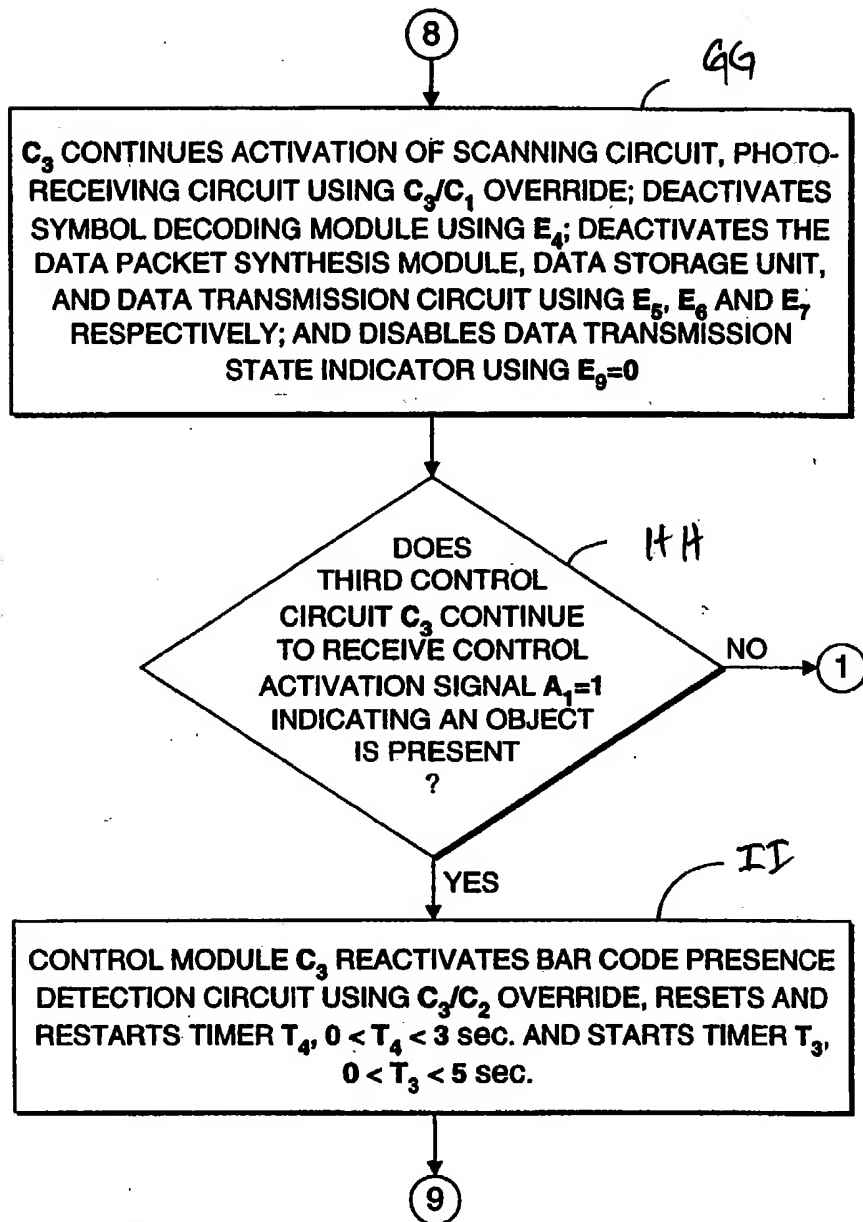


FIG 46 C4

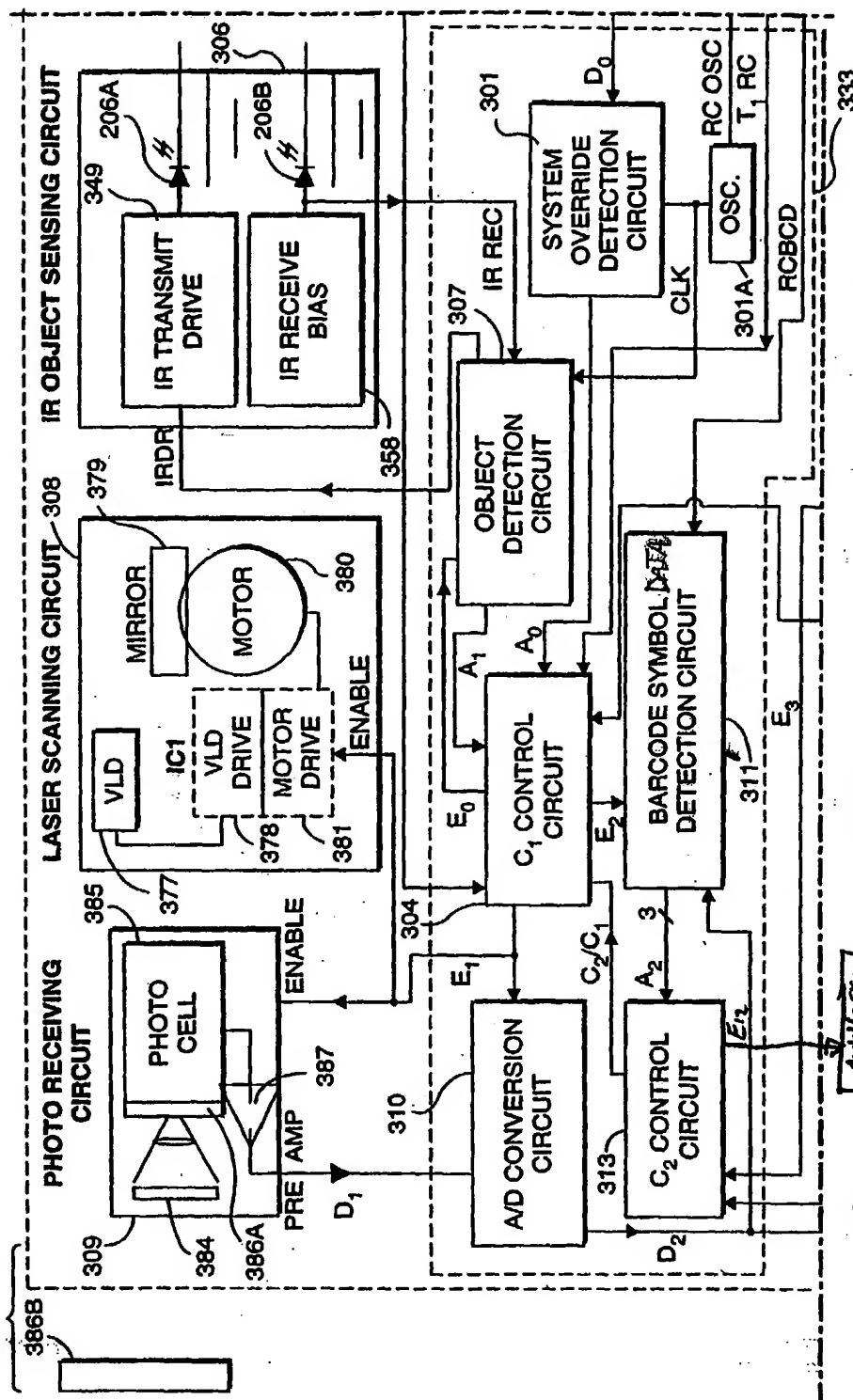


The diagram illustrates a system architecture for a handheld device (791) and a wrist device (792) communicating with a host system (800).

- Host System (800):** Represented by a curved, wrist-like device at the top, connected to a "Host System" label.
- Handheld Device (791):** A cylindrical device with a lens and a "Pin-hole power off button". It is labeled "791".
- RF Communication Range:** Indicated by a dashed line connecting the handheld device to the wrist device.
- 2-Way RF Communication Link:** Indicated by a solid line connecting the handheld device to the wrist device.
- 2D Bar Code Structure (e.g. PDF417):** A grid-like structure at the bottom left, labeled "2D Bar Code Structure (e.g. PDF417)".
- Reading operation:** A dashed line connects the handheld device to the 2D bar code structure, labeled "Reading operation".
- Note:** "Note: The user enables Downward Scanning Movement during 2-D Bar Code Reading operation, and device generates clicks Therewith".
- Clicks:** The handheld device is shown with "click, click, click, ..." sound effects.

FIG. 47

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806 FIG. 47A1  
(pico-electric transducer)

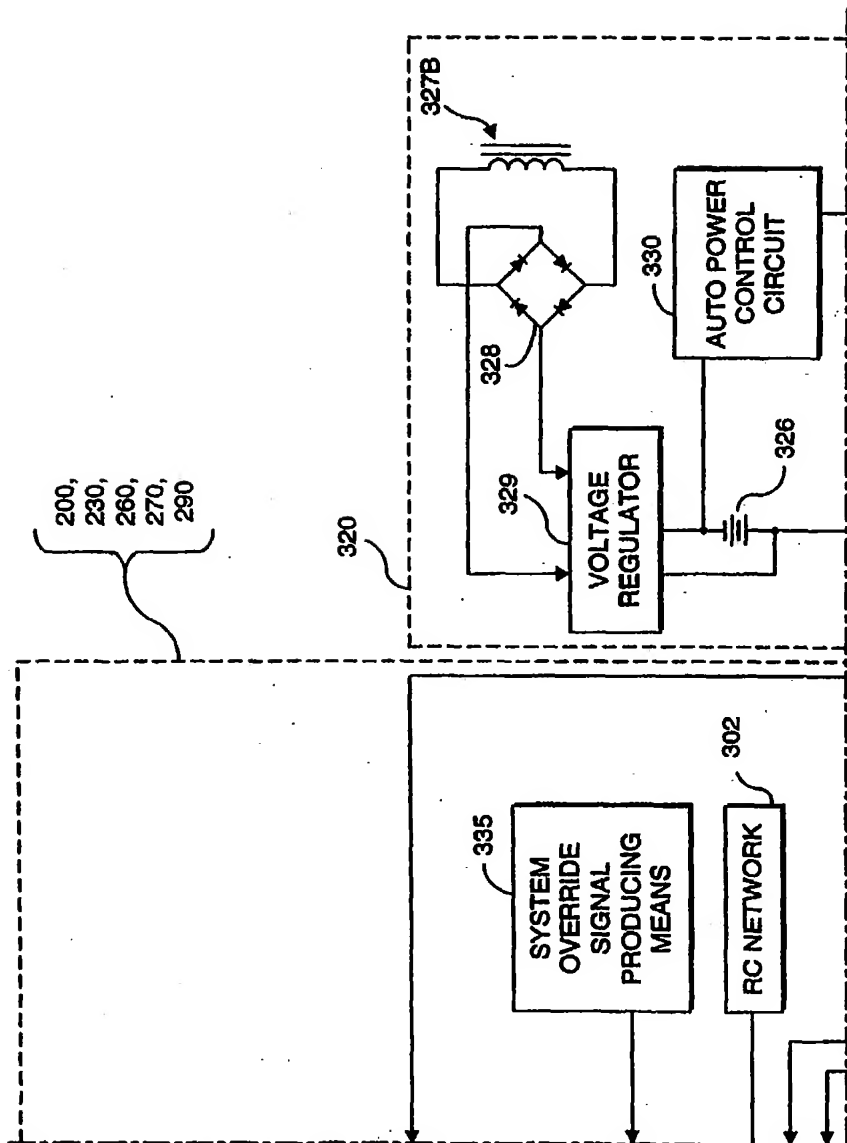
Audio 555  
Data Capture  
Buffer  
Indicator

800



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FIG 47A3



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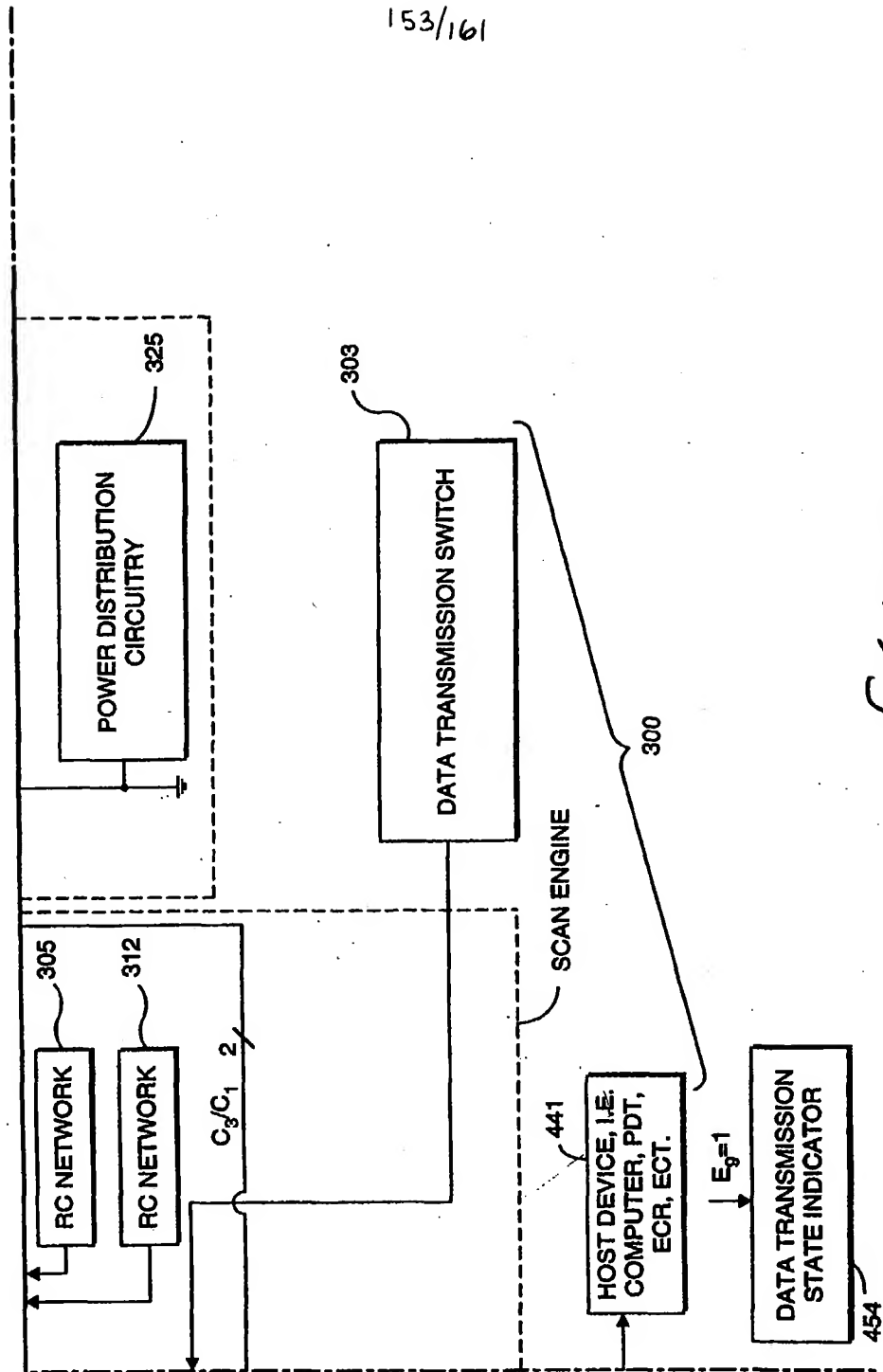


FIG. 47A4

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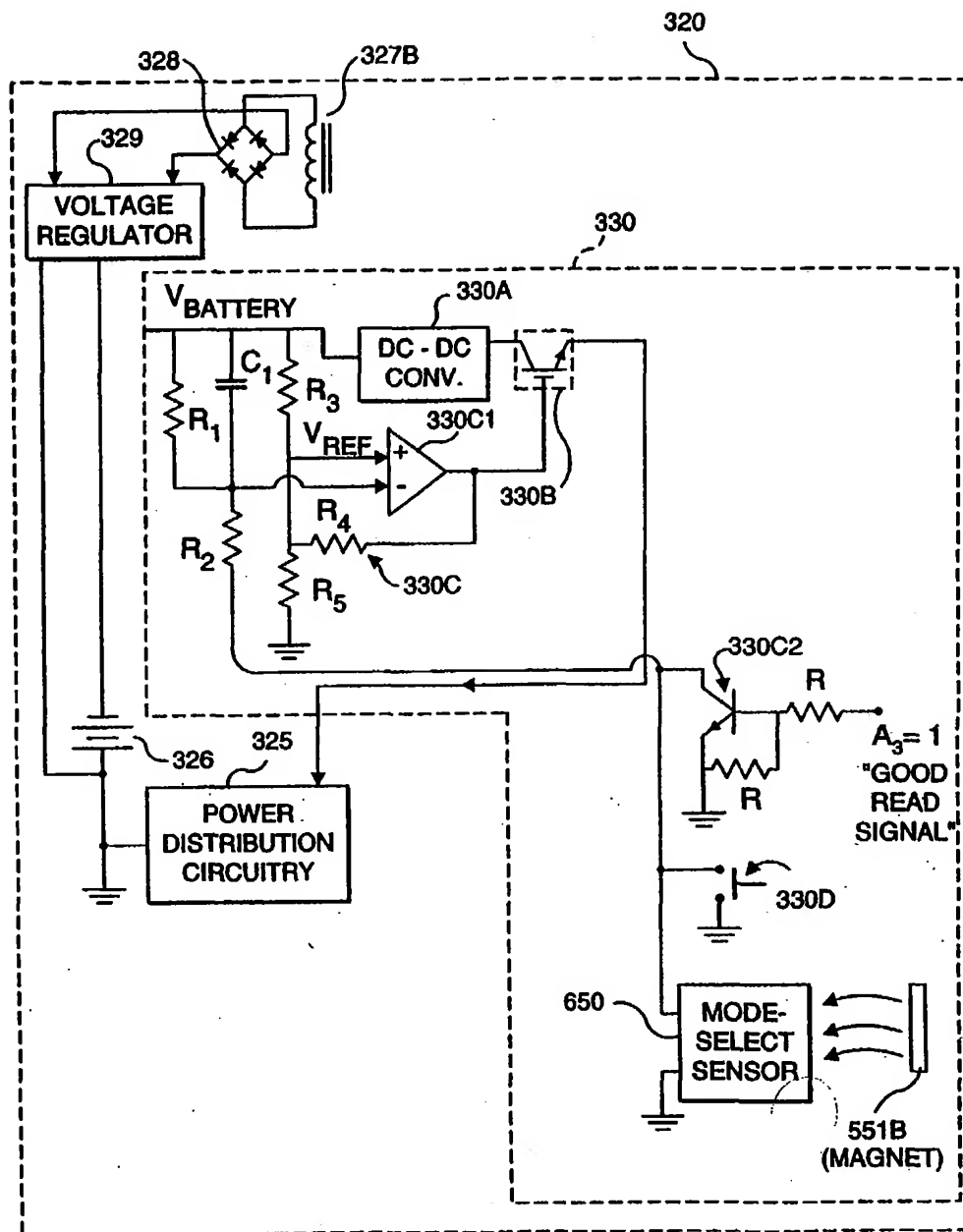


FIG. 47B

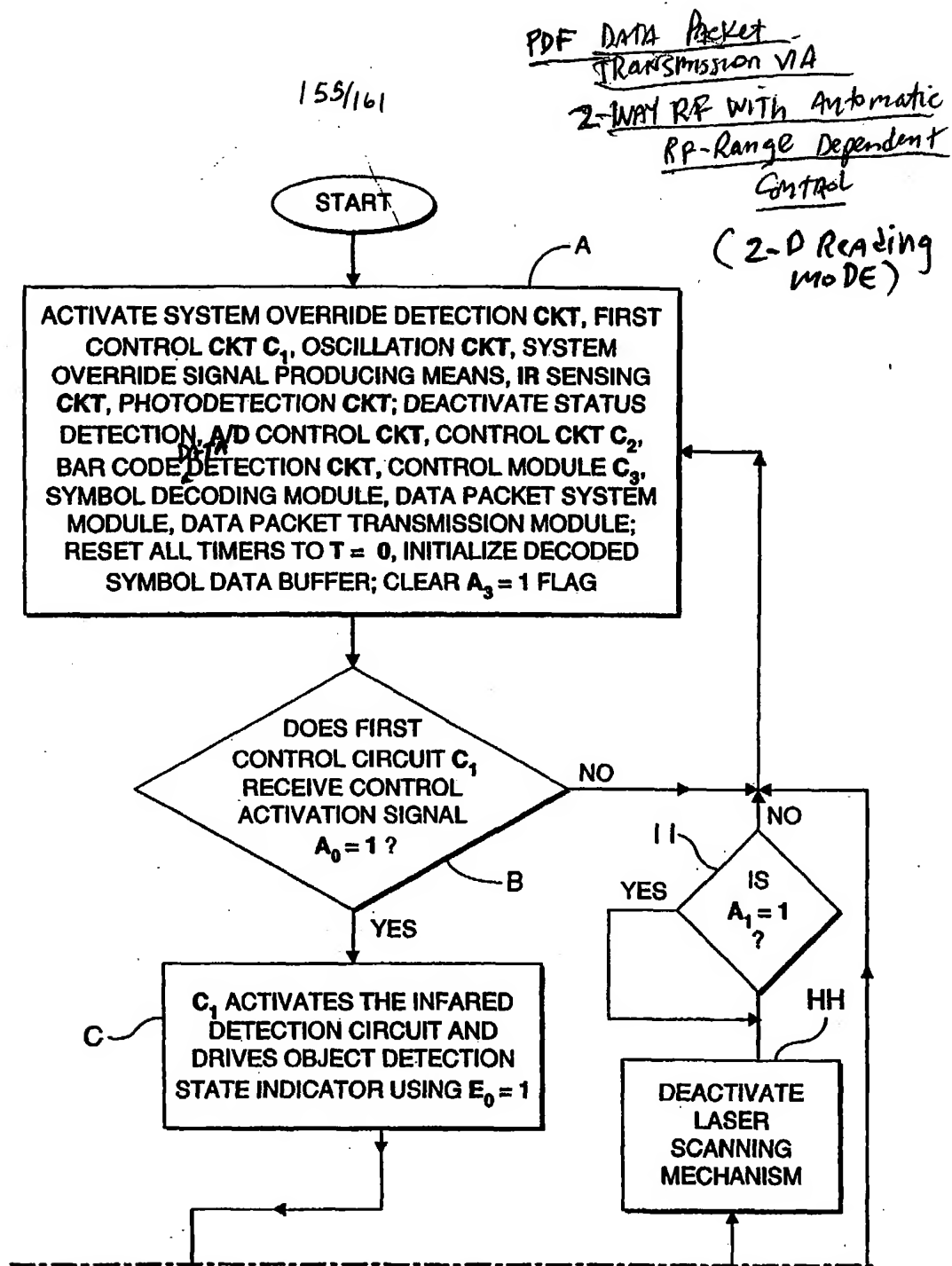
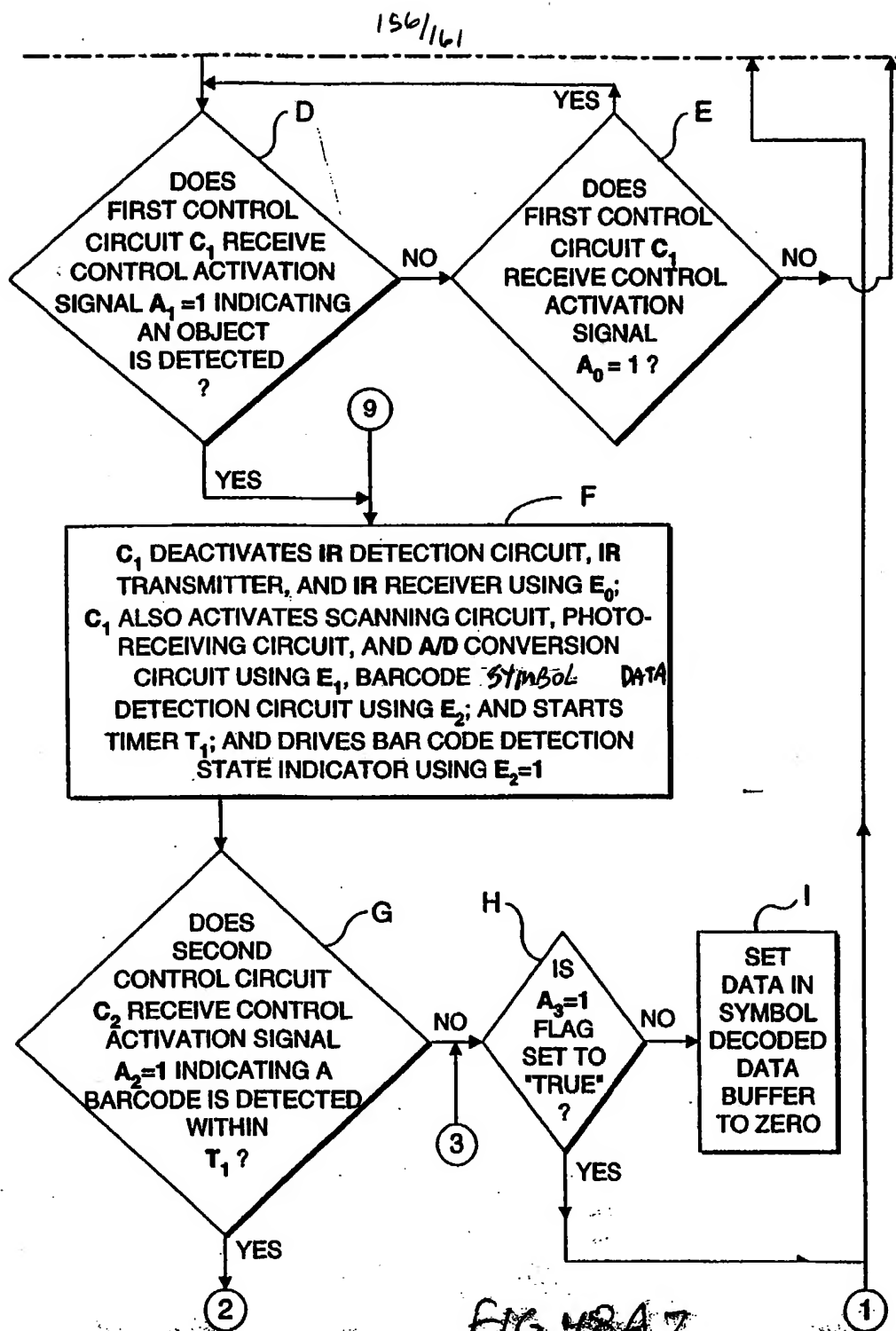
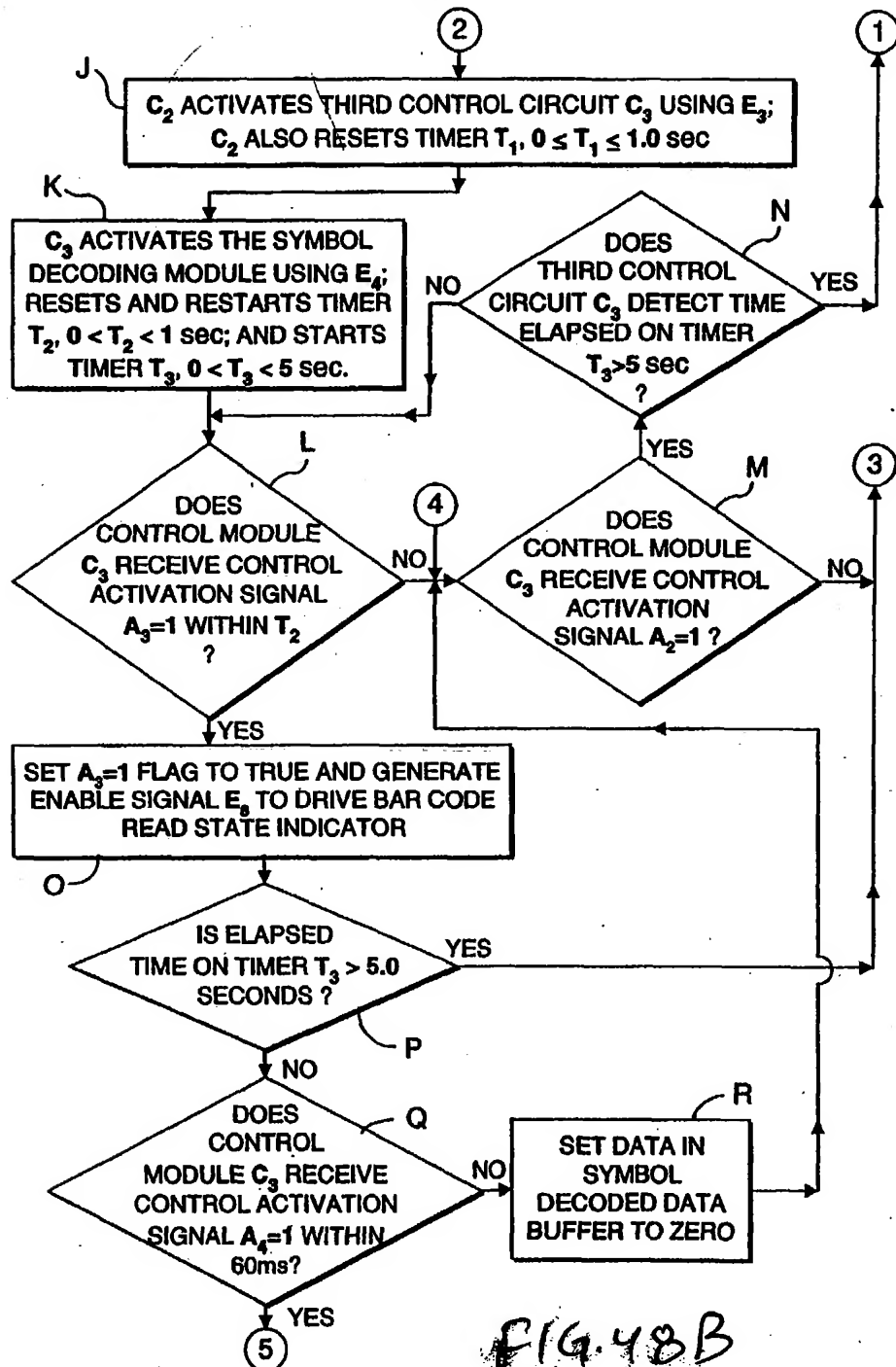


FIG. 48A1





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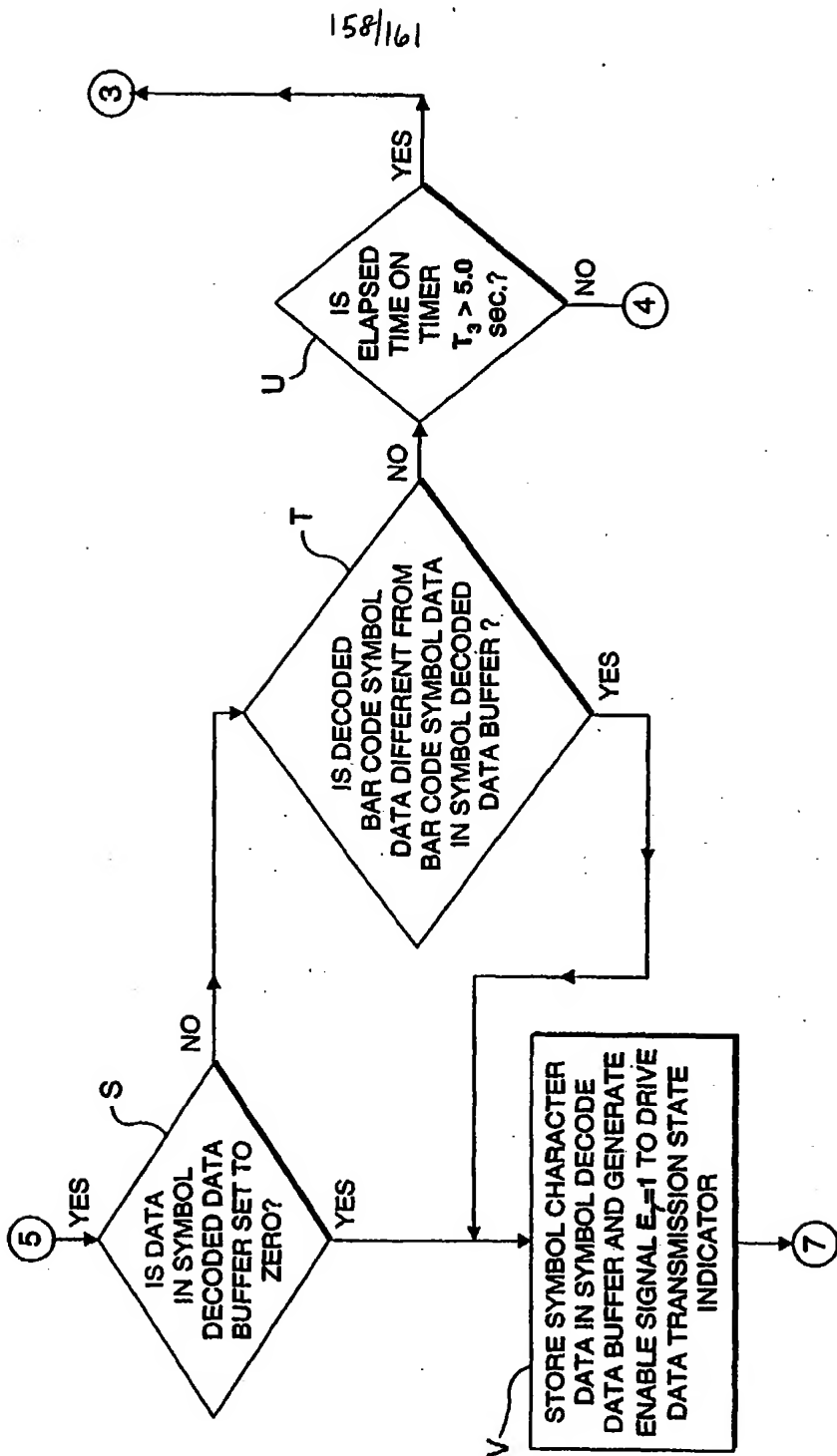
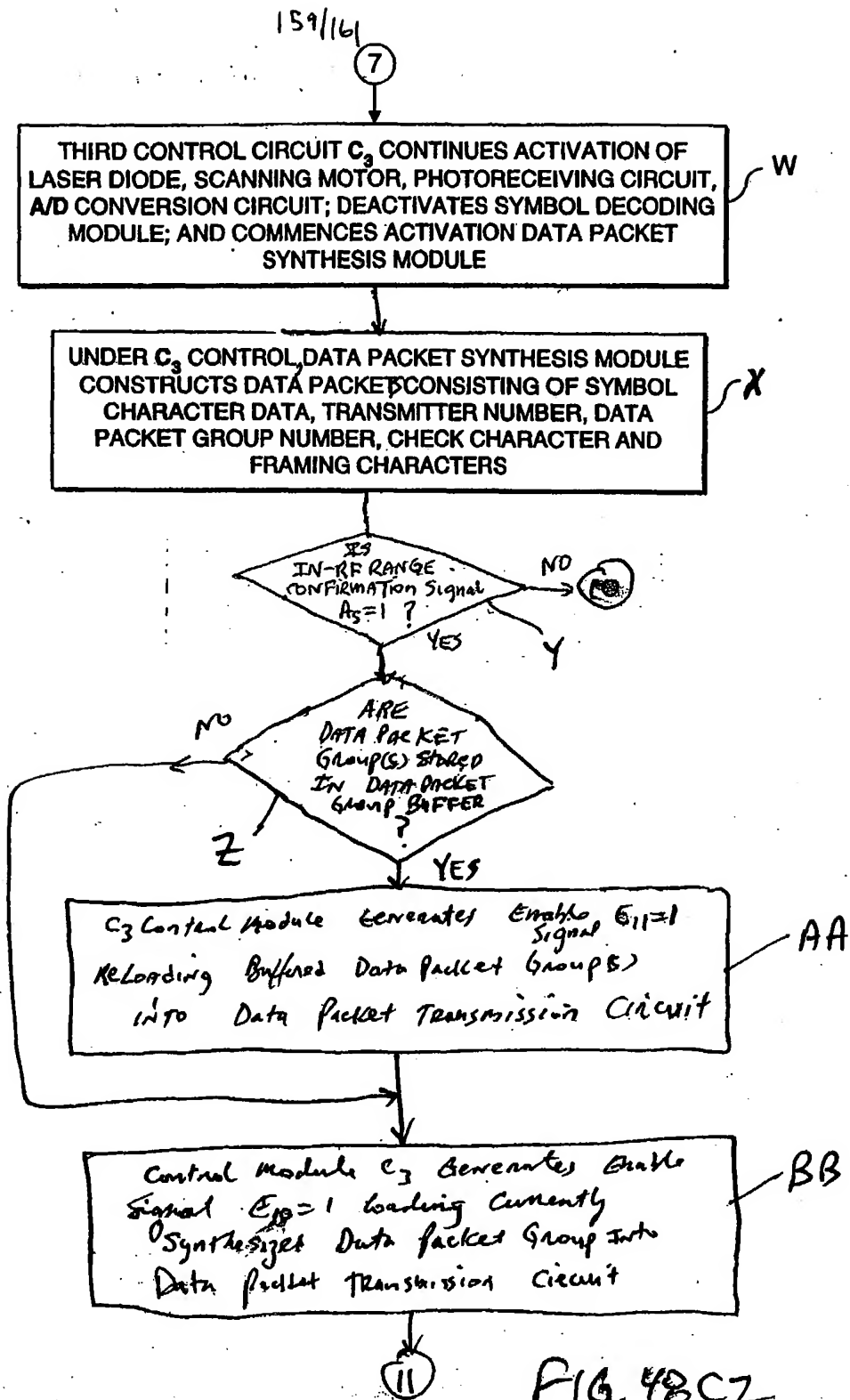


FIG. 48C1



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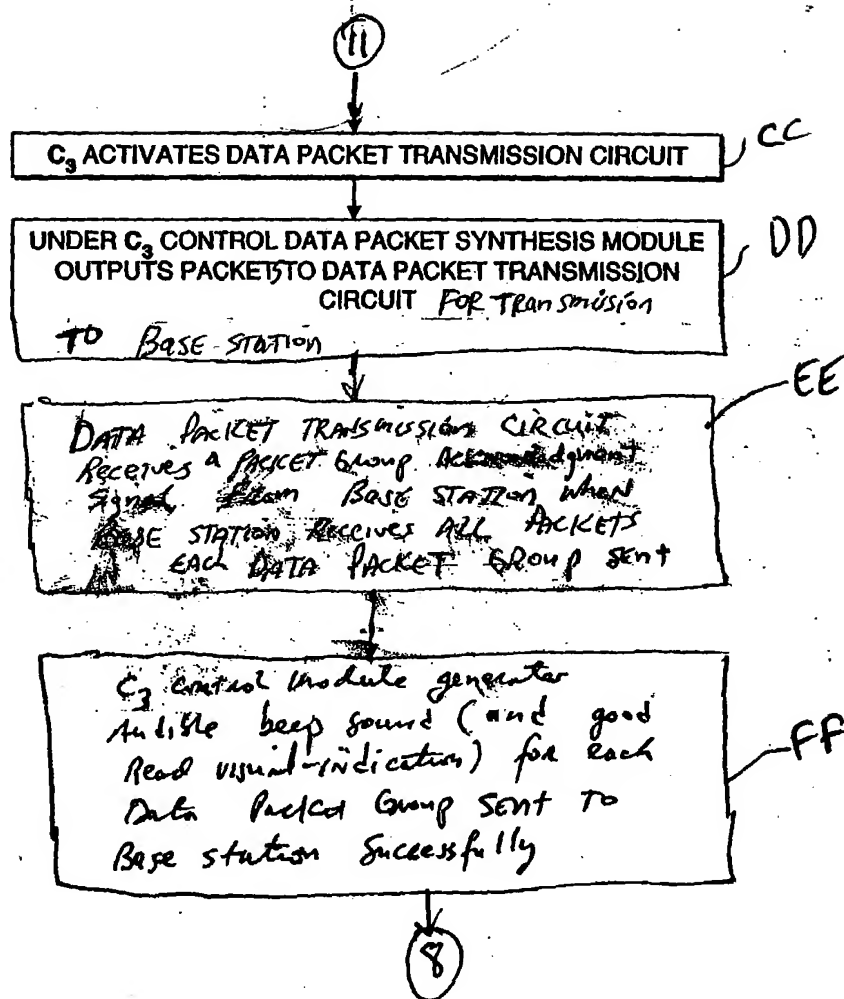


FIG. 48C3

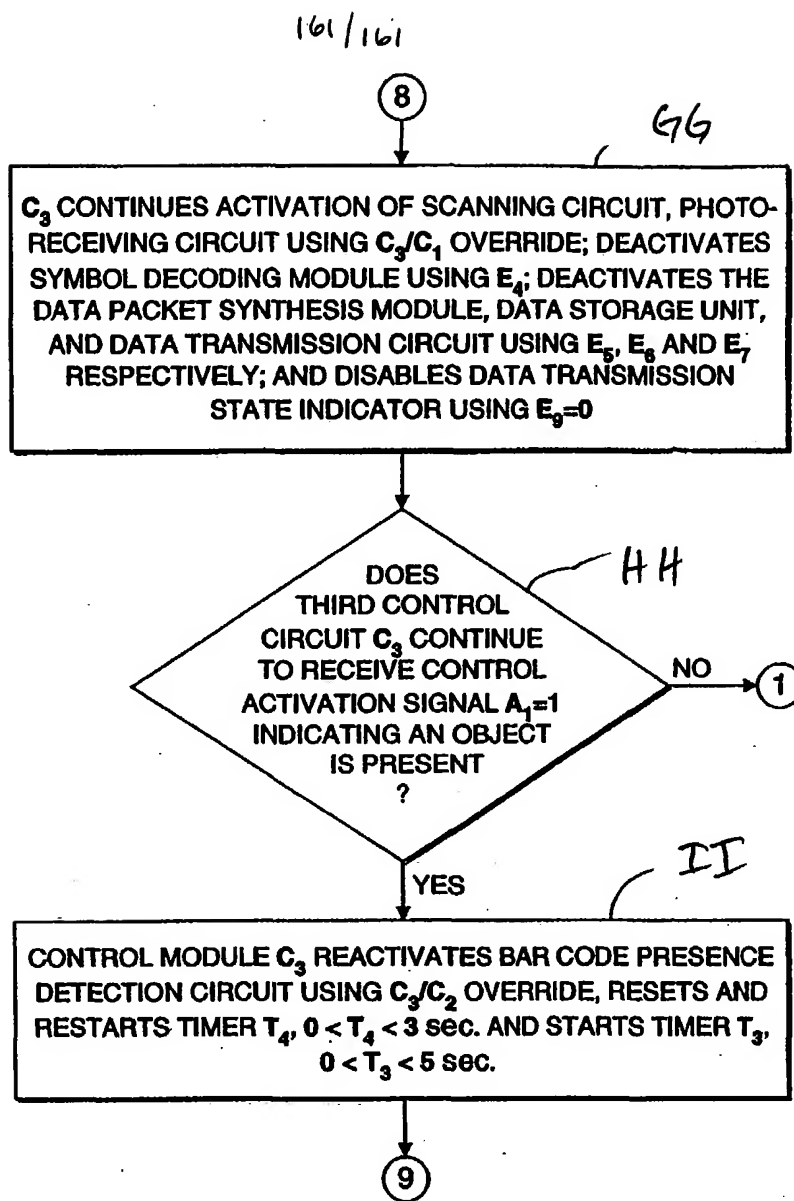


FIG. 48C4